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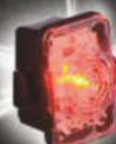
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WISH YOU WERE HERE

Maratona dles Dolomites

There are a select group of events throughout the year that have become firmly cemented on every endurance rider's bucket list and the Maratona is one of them.

The distance — 138 kilometres or 86 miles — may not sound like a big deal, but consider the fact that you'll be climbing a total of 4,230 metres throughout the course of the day and it becomes one of Europe's epics.

The first edition took place on July 12, 1987 with what was a unique route of 175 kilometres at the time, seeing 166 riders cross the finish line.

Things have grown year-on-year for the Maratona, with an impressive 9,434 people signing up this year, the fastest of whom was Salimbeni Luigi, 36, who

recorded a time of 4-44-43 for the distance.

For *Cycling Active* reader Mark Moss, the Maratona was where he made his gran fondo debut in around seven hours. He said: "I had an amazing experience. There was a lot of climbing, but you are surrounded by the most beautiful scenery imaginable. The temperature was in the high 30s so this made it a tough event.

"The route was always interesting but I did learn that carbon wheels, clinchers and lots and lots of braking down switchbacks don't go together. Both wheels exploded at different points due to the heat building up! But the organisation was impressive and I ended up with two new wheels on loan from a mobile mechanic. A truly magical experience."

For more information go to www.maratona.it.

Words: Rebecca Charlton Photos: Freddy Planinscheck





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WJ-1403-WOMEN

Ladies Pro Waterproof Jacket

- 40D Polyester with PU transparent coating W/R2000mm B/R2000mm.
- 100% polyester mesh panels on air openings and inner collar seams are taped on the inside to assure no water enter.
- Welded air vents with zippers.
- Reflective taping on front and back pocket.
- Reflective silver piping and straps.
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Dragon Ride announces new route for 2016

100km addition offers taste of Welsh wilderness

T

The increasingly popular Dragon Ride will feature a brand-new 100-kilometre route when it returns on Sunday, June 5, 2016. The Macmillan 100 joins the returning Medio Fondo, Gran Fondo and Dragon Devil, all offering a unique challenge right up to the epic 'Devil' with a testing amount of elevation

nearing 3,500 metres.

The new route will offer a taste of what the Dragon Ride has to offer, and includes the signature climbs of Bwlch and Rhigos, all the while raising money for cancer charity Macmillan.

Nick Rusling, CEO of event organiser Human Race Events, said: "We are thrilled to confirm details of the 2016 Dragon Ride. We work all year round to ensure that this ride retains its outstanding reputation, and we are already very excited about what we have planned for June, including the new Macmillan 100 route."

Cecilia Owen, cycling programme manager at Macmillan Cancer Support added: "We are delighted to be the official charity once again and are extremely excited about the new Macmillan 100 distance — we look forward to welcoming cyclists to Team Macmillan to help ensure that no one has to face cancer alone."

4 routes
The longest
takes in
3500M
of climbing
The new
route has
100KM
of riding

QUOTE OF THE MONTH

"My legs are just starting to feel normal again — those hills took their toll!"

Sir Chris Hoy on riding his sportive, the Hoy100

Editor's letter

OCD: Obsessive cycling disorder

We all know that cycling can create an extraordinary level of obsession, but there are limits. Reading the Old and New School columns in this issue I was reminded of Irish novelist Flann O'Brien's 1940 masterpiece, *The Third Policeman*. In this wonderfully bonkers murder-mystery, our hero encounters an Irish police sergeant who spent so much time on his bike that his molecules and those of the bike had melded together and he had become half man/half bicycle.

I do wonder if O'Brien was pre-empting the behaviour of our columnists in this issue. On page 31 we find New School having a nightmare and waking up in a sweat about the weight of a Dura-Ace crankset. And on page 29, Old School explains why he refuses to wear a specific brand of cycling kit — which he loves and openly covets — on the principle that he isn't worthy of it. Obsessive behaviour? Clearly, but whilst we may not all share our columnists' specific obsessions, fears and foibles, we can all relate to them and understand that cycling is more than a hobby to all of us. Perhaps you may even be prepared to own up and share your obsessions with the rest of the readers — we'd love to hear them.

Talking of odd behaviour, what about the great unwashed public and their attitude to cycling? According to my friend New School it's a tale of two cultures and two very different countries. Post his attack of the night terrors, and just returned from a London-Paris ride, New School reports: "The difference in attitude was unbelievable! I've never experienced such genuine regard for people on bikes. In France car drivers pull over, people wave, kids cheer and shout out the type or name of your bike. In England it was aggressive malevolence, with one middle-aged lady in Kent screaming at us from the side of the road: "You a*seholes!"

Seems funny that I had just been pontificating about strange obsessive behaviour, but this is of another kind. What can we do to change this? What are your experiences?

Lastly, thank you for all your letters and views about the new *Cycling Active*. One thing that really stands out is that you want your letters page back. Well, so be it! You may have noticed I have been soliciting your views, so please make your contributions to be published in the next issue.

Garry Coward-Williams, acting editor



THIS MONTH'S STATS

3,437M

The amount of climbing on the 302km Dragon Devil by Human Race, organiser of the Wiggle Dragon Ride

£1,000,000

The amount of money raised to date through the gruelling Fred Whitton Challenge in its 16 years

B4011

The road on which drawing pins caused punctures for numerous riders at the Marlow Red Kite sportive in Oxfordshire

Entries open for Tour of Cambridgeshire

After a sell-out inaugural event this year, entries for the 2016 Tour of Cambridgeshire Gran Fondo have now opened.

Offering the UK's only route to the UCI Amateur Road World Championships, the closed-road event will expand from 6,000 to 8,000 places after its popularity in its first year.

With the top 25 per cent of finishers in each rider's category qualifying for a place at the UCI World Cycling Tour Finals and a shot at the coveted rainbow bands, the event will offer a unique riding experience.

But, while those at the sharp end of the field will be racing hard, organiser Very Cool Events Company is keen to remind us that there's something for everyone.

"We want every single rider to have the best cycling experience of their life," says Malcolm Smith of VCEC. "We intend to create a real festival atmosphere at the Tour of Cambridgeshire and really build a Gran Fondo community of race, sport, leisure and challenge riders. We want everyone to leave the weekend with huge smiles on their faces."

Entries for the Gran Fondo are now available at www.tourofcambridgeshire.com.

INNOVATIONS

SRAM eTap revealed

The latest advancement in electronic shifting comes from SRAM with its eagerly anticipated wireless groupset announced to hit the market for spring 2016.

It's the world's first groupset to offer a completely wireless design, with SRAM also moving away from its unique DoubleTap system that we're familiar with from its previous road groupsets.

The shifters are paired electronically with the derailleurs unlike other leading electronic groupsets and SRAM claims that the shifting is not only improved, but the system as a whole is also lighter.

The whole set-up is expected to cost £2,059.

Garmin launches Edge Explore 1000

Designed with touring and adventure in mind, Garmin has released the Edge Explore 1000 featuring preloaded Garmin Cycle Maps with routable road and bike paths.

Offering elevation data, points of interest and an address search, it aims to add a user-friendly way to improve navigation on long rides.

When paired with a compatible Bluetooth device and the Garmin Connect Mobile app, the Edge Explore 1000 offers live tracking, incoming call and text alerts, social media sharing, weather, wireless uploads and sending or receiving courses. All this comes in at a cost of £349.99.



2016 MODEL UPDATE

De Rosa teams up with Pininfarina

Following in the wheeltracks of high-profile bike and car brand collaborations such as Specialized with McLaren and Colnago with Ferrari, De Rosa and Pininfarina now bring us the De Rosa SK Pininfarina.

Cycling Active took a sneak peek at this high-end machine at the annual Eurobike show last month — the place to be to get a first look at all the developments and trends for 2016 and beyond. We don't have an official price yet but we have heard that the carbon-fibre is hand-woven in the De Rosa factory.

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Hoy100

"A fantastic route on quiet roads with the Yorkshire Dales forming a stunning backdrop framed by perfect weather and a rolling purple carpet of heather. Tough but rewarding."

James Ward

Time: 6hr 45min (100 miles)

Rider's rating



Hoy100

"With steep, challenging climbs and incredible views over the Yorkshire Dales, the route more than gave back what it took out of my screaming legs! I really enjoyed the ride, even if my legs didn't..."

Sarah Marsden

Time: 4hr

Distance: 50 miles

Rider's rating



Haute Route

"By far the best event I've ever taken part in. The strap line certainly lives up to its claim that it's the 'toughest and highest sportive in the world'. 14,000ft of climbing taking in Galibier, Croix de Fer and Les Deux Alpes."

James Golding

Time: 8hr 10min

Distance: 105 miles

Rider's rating



CTC Merseyside Wild Wales Challenge

"An annual event held by the Merseyside branch of the CTC on some of the most scenic roads in Wales, with 2,702m of climbing. It's the best sportive out there."

Steve Bowman

Time: 5hr 52min

Distance: 139km

Rider's rating



Maratona

"This was my first experience of a Gran Fondo and I had a truly magical experience. I did learn that carbon wheels, clinchers and lots of braking down switchbacks don't go together, though — both inner tubes burst!"

Mark Moss

Time: 7 hours

Distance: 86 miles

Rider's rating



Rapha Manchester to London

"The event was a real test for both legs and mind. Thankfully, I managed to join a group that contained a few Rapha employees and triple jumper Jonathan Edwards."

Steve Coldicott

Time: 17 hours

Distance: 225 miles

Rider's rating



Reg Harris Sportive

"It was a tough day with 4,700ft of climbing, but great fun and really well organised. I rode to raise money for @ArthritisRUK."

Marcus Hurst

Time: 3hr 43min

Distance: 52 miles

Rider's rating



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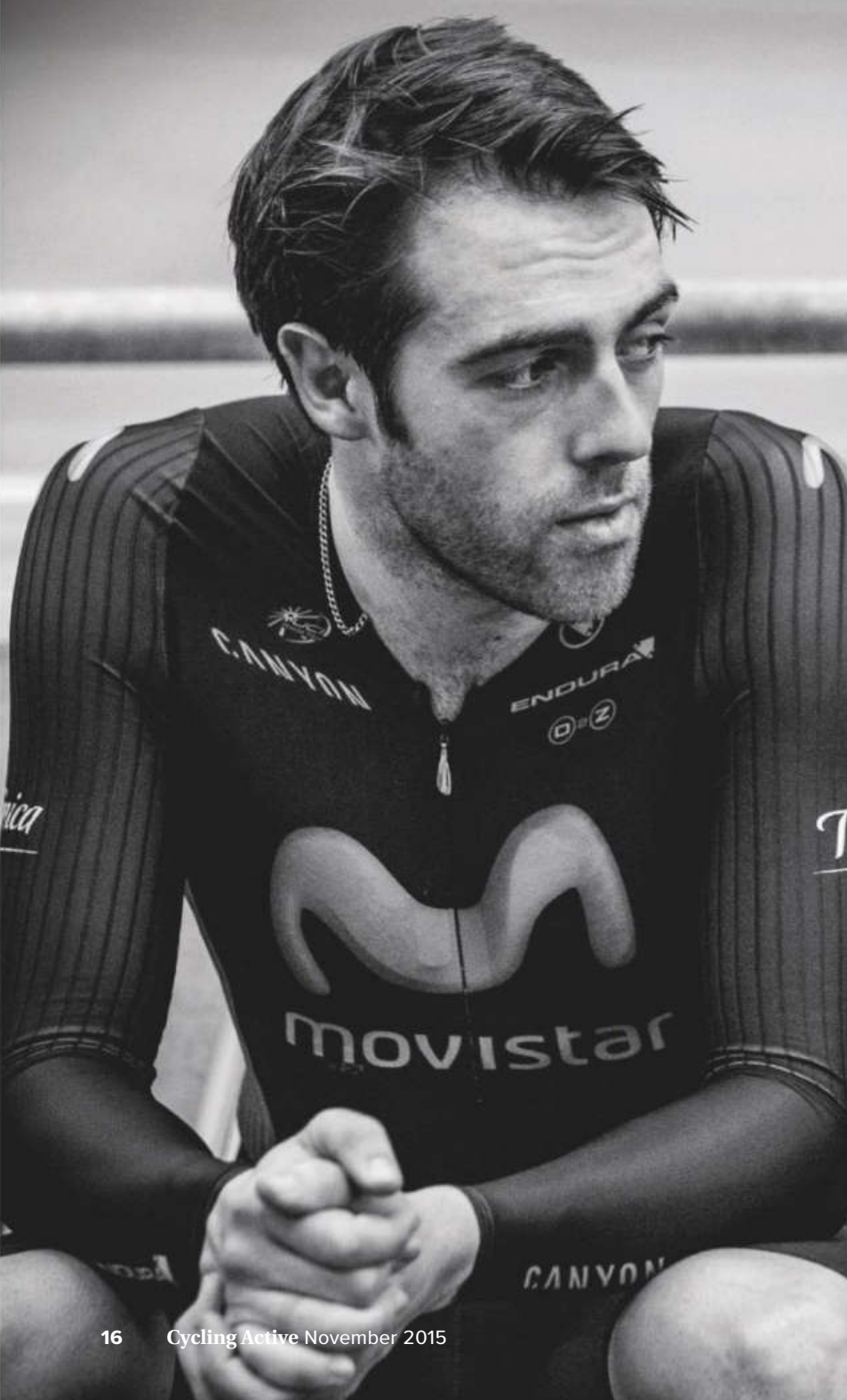
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Alex Dowsett

Professional racer

Former UCI Hour record holder, Commonwealth and British national time trial champion



1 Now I go for function over style — I used to be obsessed with how I looked on the bike. The GB Academy started to drum that out of me and now I'll almost always pick an option that will make life on the bike as easy or fast as possible; the sport is too tough not to.

2 I don't give away my secrets any more. I told a good friend how to win the National TT champs one year, she did exactly that, won, and then told everyone precisely what I'd told her in a magazine. I have a tactical edge in time trialling that I want to keep as my actual power figures aren't amazing. I'll write a 'how to' book when I retire.

3 Coaching morale is another worthwhile form of training. For me these are things like go-karting, cake, time with friends or a full-blown night out. There has to be a balance though; too much or too little will have a negative effect on my racing. Maybe I would win more races if I lived like a monk, but I'm happy and sometimes that counts for more.

4 In the last year or so I've started to think about life after cycling. A pro rider's career can end at any time with a nasty crash. I've learned the hard way that fast cars are not wise investments but I've set up Cyclism, a coaching, performance and events company that should keep me busy post-retirement.

5 The Miles for Haemophilia campaign and my Little Bleeders charity have shown me exactly what in this world is really important. I was put here to race bikes — not necessarily to win — but to show the next generation of haemophiliacs what we're capable of now thanks to the advances of modern medicine. I get more satisfaction out of being used as an example to young haemophiliacs, to show what they could do when they grow up, than winning any bike race.

Alex Dowsett is the founder of Cyclism: www.cyclism.com and also runs the charitable foundation Little Bleeders to raise awareness of haemophilia: www.littlebleeders.com

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WE LIKE

Hardware



Shimano Tiagra 4700 double chainset £94.99

Shimano's new Tiagra groupset looks much like its higher-end siblings, whose four-arm design this chainset has adopted. It comes in 50/34 compact and 52/36 semi-compact. www.madison.co.uk



Fabric Scoop Flat Pro saddle £109.99

Fabric's Scoop saddles start at £39.99 (steel rails, nylon base), up to this carbon-railed model. For £169.99, you can upgrade to a carbon base (10g lighter). Various colour options. www.fabric.cc



Garmin Edge 25 £139.99

Weighing only 24g and with a 2.3cmsq display screen, the Edge 25 is said to be the smallest cycling GPS device in the world. It is ideal for riders wanting to track performance but who are not hung-up on data. www.garmin.com



Vittoria Qurano 46 tubular wheelset £1,199.99

Vittoria's first foray into wheels includes these stunning deep-section hoops. Graphene keeps weight low and strength high. The 42/46mm front/rear have an asymmetric spoke design. www.chickencycles.co.uk



Cycling Ceramic jockey wheels £95

These jockey wheels are lightweight and have been designed to minimise friction through smooth-rolling ceramic bearings. Available in red or black for Campag, SRAM or Shimano. www.cyclingceramic.fr



Garmin Virb XE £319.99

The latest Virb promises higher quality along with the ability to connect to ANT+ sensors. This means you can produce videos with all the metrics you want — even G-force — laid over the top. A techie's wet dream, right there.

www.madison.co.uk



DS2 Tabletop digital scales £34.99

We would struggle without our DS2 scales from Park Tool, as we weigh everything. Accurate to within 2g, with a capacity of 3kg, these scales leave nothing to guesswork.

www.madison.co.uk



Kopi coffee £7.95

Cycling and coffee go together like football and loutishness. Receiving a 250g packet of coffee from different places around the world each month (from £6.95 depending on the plan selected) is thus very appealing.

www.kopi.co.uk



Castelli rolling travel bag £200

Castelli's travel bag is airline carry-on size, with the brand's famous red scorpion logo on the side. It's padded and has two carry handles, a puller handle and two large wheels.

www.saddleback.co.uk



Rapha B&O H6 headphones £329

Audio expert? Then you'll know that Bang & Olufsen kit is top-notch. Adding subtle style from Rapha makes them all the sweeter. Cycling fashion never sounded better.

www.rapha.cc

WE LIKE

Software



Biemme seamless mesh base layer £25

Biemme's base layer has a string-vest look and offers plenty of ventilation for summer rides. During autumn it can be combined with a wind-resistant jersey for extra insulation.
www.creazzo.co.uk



Oakley Polarized Radar EV Pitch sunglasses £175

These half-rims from Oakley come with polarised lenses to reduce glare, while the rims have the quality finish that the American company is renowned for. They also look great.
www.oakley.com



Mavic CXR Ultimate £150

Mavic describes this lid as an everyday aero racing helmet that can help to maximise speed while keeping you cool. The CXR Ultimate also features removable padding and a lightweight retention system.
www.mavic.co.uk



Rapha Pro Team Rain Gilet Data Print £140

Race-proven by Team Sky, this waterproof gilet is a pared-down version of Rapha's popular Race Cape and as such can be easily stuffed in a pocket. Also available in plain black.
www.rapha.cc



Velotoze overshoe £14.99

Basically a swimming cap for your feet, these overshoes offer top weather protection. You'll be glad to don them on wetter days. Available in a range of different colours, in long and short-cuff versions, the Velotoze also act as a great aerodynamic aid.
www.velobrand.co.uk



POC DO Blade Raceday sunglasses £200

Get the pro look with these sunglasses as worn by the Cannondale-Garmin team. The extra-large curved lenses give great peripheral vision and they are coated to reduce misting. The violet lenses help to improve contrast too.

www.2pure.co.uk



Castelli Diverso socks £17

Made from a mix of merino wool for warmth, together with nylon and Lycra for added durability, the Diverso socks are a comfortable, not to mention colourful, way to look after your feet.

www.saddleback.co.uk



Sugoi RS legwarmers £44.99

These leg-warmers have an ultra-sophisticated top gripper made of silicone microdots that grip your legs comfortably. To make doubly sure you don't end up with a gap, they've got red diagonal grippers on the outside to keep your shorts in place.

www.sugoi.com



Spiuk Z16R road shoes £109.95

Spanish brand Spiuk produces a wide range of cycling kit, and these shoes are good value and very comfortable. They're well ventilated with a series of small perforations in the upper, and come with a fibreglass sole.

www.silverfish-uk.com



Parlee ESX-R Custom

£3,299*

The choice of retired pros such as David Millar and *that* American rider, Parlee bikes provide quality and offer the ability to customise

Massachusetts-based company Parlee has a reputation for producing quality carbon-fibre bikes, with an emphasis on customisation.

New for 2015 is the Parlee ESX-R (£3,299 for the frameset), which is a slightly more affordable version of Parlee's aero road ESX (£3,999). The difference between the two? Just 100g.

While Parlee offers its Z-Zero model in full custom geometry, the same rules don't apply to the ESX and ESX-R. Instead it offers an extensive range of sizes to go with the custom specification and paint job. The sizes range from small to extra large, with each individual size offering three different stack and reach combinations.

Founder Bob Parlee has a background in designing and fabricating boats, which, says Parlee, was of great use in the design of the ESX.

Parlee claims that with its unique 'fluted tail' shape, the "Recurve delivers the ideal blend of low drag and high torsional stiffness — along with road-smoothing comfort that is so often lacking in aero bikes".

Should you be lucky enough to be in the market for one of these stunning machines, you will be presented with the option of customising the components, finishing kit and paint job.

In case you were wondering, ESX stands for Essex — not the county that borders east London — but Essex County in Massachusetts, that lies to the north-east of Boston, where Parlee is based. It was here that a lot of testing on the new frame took place, and while the ESX name was originally a bit of a company in-joke, it stuck.

Contact: www.parleecycles.com

* frameset only

Drivetrain

Front derailleur:

Shimano Dura-Ace Di2

Rear derailleur:

Shimano Dura-Ace Di2

Cassette:

Shimano Dura-Ace 11-speed, CS 9000 11-28

Chain:

KMC DLC

11-speed

Brakes:

EE Cycleworks

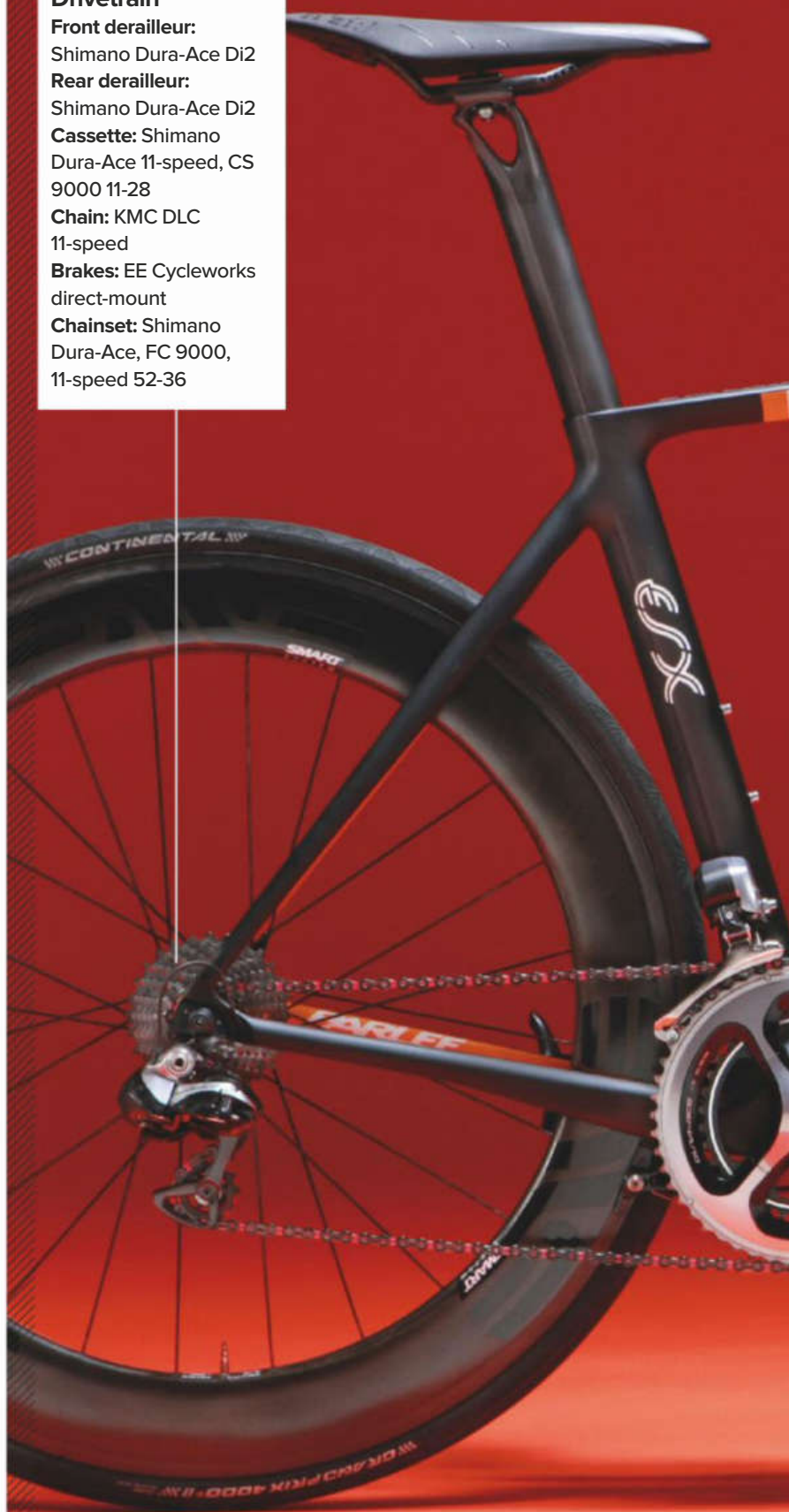
direct-mount

Chainset:

Shimano

Dura-Ace, FC 9000,

11-speed 52-36



Frameset

Frame: Parlee ESX-R
(1,060g)
Fork: Parlee ESX-R (370g)
Seat Post: Parlee Recurve
Carbon

Finishing kit

Handlebar: 3T
Ergonova Stealth
Stem: 3T ARX II Team
(6° 120mm)
Saddle: Fizik Arione
R1 braided

Wheels

Wheelset: Enve Smart
6.7 carbon clinchers
Hubs: Chris King
Tyres: Continental
GP4000 25mm

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And, if great performance, low weight and quality aren't enough, the hubs are a thing of beauty too, and are available in nine anodised colours. In a world where most things seem to be manufactured in the Far East, Chris King prides itself on engineering, manufacturing and assembling all its hubs in Portland, Oregon.

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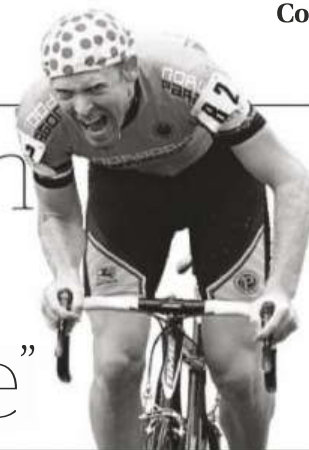


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“To dress head-to-toe in Rapha would be a fraud. I know my place”



Simon Warren is a former club racer, time triallist and the author of the popular *100 Greatest Cycling Climbs* series of books. He loves Rapha but you won't find him wearing it...

First of all, I love the clothes. I love the design, the simplicity, the colour palette, the typography, and the kind of attention to detail that even Wes Anderson would be jealous of. One friend even sends me his discarded packaging because he knows I will hoard it, unable to discard such good design.

But Rapha is, of course, about more than just the clothing; it markets itself as a lifestyle, an ideology, etched in black and white, fuelled by suffering and thousand-yard stares, then wrapped in flowing prose and beautiful photography. Its models, photographers, writers and designers create a utopia in which we can share if we buy and wear the clothes. Trouble is, I can't wear Rapha.

Now, it's not just the image of cycling Rapha is trying to sell me. The perpetual strained expressions and furrowed brows, like it's all so awfully hard. Cycling isn't hard; bringing up chi hard. Mining silver in Honduras is hard. fun. Dressing in expensive stylish clothing is a privilege, not a chore: stop grimacing and smile for heaven's sake!

Rapha imposter

The Rapha rider checks the mirror before every ride. Would I have to do this? If I started to wear Rapha, would I also have to sport a full beard and get a sleeve tattoo to complete the conformity? Would I have to ensure that I'm turned out to the proper standards just in case the fashion police are waiting in the bushes of Epping Forest to issue me a ticket? What if the highlight on my socks clashes with the tone of the rubber nose-piece of my glasses? Maybe I should be better turned out, but once you start, you are trapped. Right? Once you raise your standards, once you assume a place at the top, in top kit, you have to stay there. Thing is, I don't belong at the top, which brings me to my next barrier.

When I entered the world of cycling in the Eighties, there was an unspoken rule that you didn't turn up to a race with equipment better than your ability, and

this is something I can't shake. You earned your kit with hard work, not just the size of your wallet. You bought what you needed when you needed it and, more importantly, when you could afford it. Hanging around the start of a race, you knew which bikes belonged to the Boardmans, the Cammishs, the Longbottoms — they were the ones with the top-of-the-range groupsets, bespoke frames and disc wheels.

Preparing for the evening '10' on a Thursday night, any man who took a disc from their car boot, let alone a Low-Profile*, had better be challenging for the win or they'd be laughed out of town. There was the occasional exception to the rules, which at our club came in the shape of Tony Ablewhite. Tony was new to cycling, taking it up later in life. He had a bit of money, and he rolled up at the club '10' on a brand new Pinarello decked out with a Record groupset, blue Zipp disc at the back, and yellow trispoke at the front. I can hear the cries. "All the gear and no idea!" Well, no... he was fast. Tony also had the class to justify his kit, you see; he wasn't a poser; he had power and speed, so long as there wasn't a hill in the course.

In this environment, to ride the best, you had to be the best. Well, not anymore. Now, the top kit belongs to anyone willing to pay for it. That's why, to me, Rapha says stockbrokers, hedge-fund managers and executives who are buying into the image, bypassing generations of tradition. What if I was mistaken for a stockbroker or hedge-fund manager, let alone an elite rider? I couldn't live with that.

To dress head-to-toe in Rapha would be fraud. I know my place in the hierarchy, and I am happy with it. I have no need to elevate it, to pretend to be something I'm not. I 'suffer' in colour, not black and white, and I always try to raise a smile when I ride. Yes, I am stubborn, and can be bitter, and that means that, as much as I lust for Rapha, I just can't wear it.

* Low-Profile refers to the style of time trial frame popular at the time. Before the invention of aero-bars a smaller, 26in or 24in front wheel would be used, allowing the frame to slope down at the front and the rider to adopt a more aerodynamic riding position.



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“Do I need those beautifully aero-shaped handlebars? Hell yes!”

When Brett Lewis started dreaming of Shimano groupsets he had to admit his childhood addiction to bike tech was back, only this time it was going to be a lot more expensive...

I wake suddenly in a blind panic. It's 5.30am and I'm bathed in sweat. Was it that recurring nightmare about pedalling furiously, but every-one passing me? No. I pick up my iPhone and google 'Dura-Ace crankset weight'. I get the answer to the problem that caused my subconscious anxiety — it's 636 grams. Relief. I really should either get up and walk the dog or go back to sleep, but the 105 v Ultegra v Dura-Ace weight debate continues to spin around my head. I've become a subconscious bike geek again. I really do need to keep quiet about this — surely there can't be anything as mad as a middle-aged, born-again bike geek?

My first experience of being a bike geek was as a spotty and not-so-sporty 10-year-old. We were light on bike shops in my part of Wales, so my only release was to hang around at the local toy shop that sold bikes and obsess over what type of straps I'd have for my toe clips. The big question for me — and my equally spotty mates — was “five-speed or six-speed SunTour derailleur?” It was never a Chopper for me — my bike had to have drops, toe clips and *that* derailleur. We had mountains to ride and a Chopper was never going to get me to the top.

Thirty-eight years later and I'm at it again, but this time my bike is carbon and aero. It's now augmented with Dura-Ace and shod with Zipp. It's exactly what I think a bike should be: it's very light, it's cool, it's black and it reeks of modern design and technology. Its personality is driven by one key statement: it's aero. To me this means sculptured and slippery. If Batman had a bike it would be this one. The bad guys of Gotham would know all about it — never mind the Batmobile, check out these carbon curves...

Since I bought my bike 18 months ago, we've become best friends and have ridden a few thousand miles together. As components have worn, I've done what bike shops want you to do and upgraded. In fact I'm riding the equivalent of Trigger's broom: the only

part of the bike that is still the original is the frame and the bottle cage. Although it's still my bike, there's nothing else left over from the bike I chose to ride for my first sportive 18 months ago.

Grimacing grinder

Do I really need those beautifully aero-shaped handlebars? That very light groupset? And those carbon wheels? Hell yes!

I know what you're going to say: “Does it make you go any faster?” I don't really know, and I'm certainly not going to get on anything slower to find out! I need all the help I can get. Talking about that help, the reason for my newly found bike geekiness is that my other secret is my total inability on long climbs, but it's not that much of a secret when you see my riding style, or lack thereof.

I'm six feet something and roughly the same dimensions as Sky rider Ian Stannard. He's a big guy who looks even bigger on a bike. He's clearly not going to take a lot of KoMs. Neither will I. In fact I struggle up the smallest incline like a hippo giving birth. I tried standing; sitting; high-cadence spinning and with my hands in the middle of the bar. But no — I'm still pushing hippos when I'm grinding my way to gain that altitude.

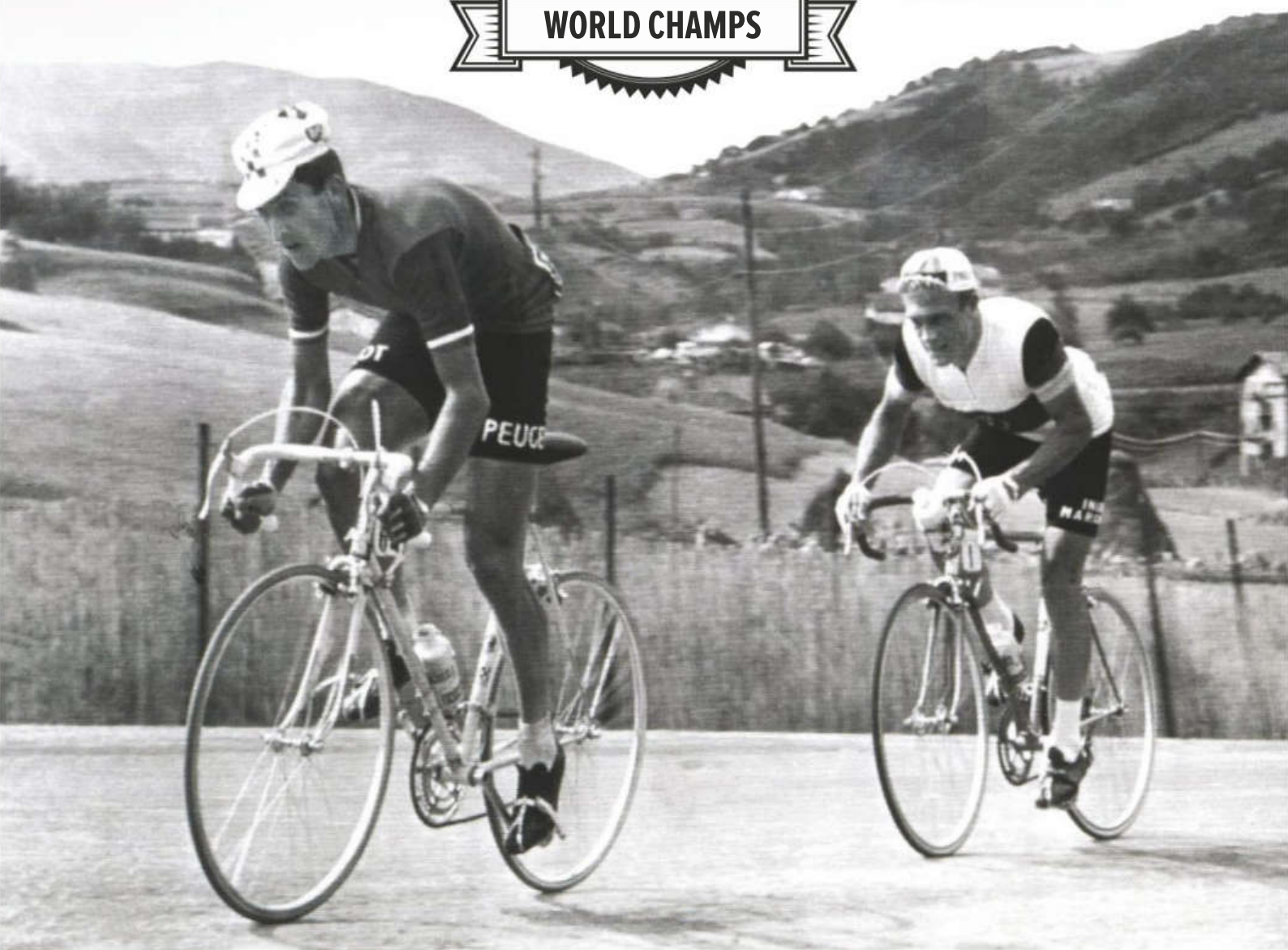
Some of my bike mates love climbing and some, like Old School, even write books about it. They are just like mountain goats on their bikes. Strangely, they also look like mountain goats off their bikes: thin, sinewy, gangly and lightweight. For them the Catford hill-climb is an event to enter, for me it's one to watch. Oddly they also have mountain goat-like bikes: thin, sinewy, gangly things. They don't need the help that I do.

If you've got a touch of the hippos on hill-climbs and you've been eyeing up crankset weights, be very careful out there. That inner bike geek is waiting to jump out. But don't fret — your secret is safe with me. I won't tell anyone.



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GREAT MOMENTS
TOM SIMPSON
 SEPTEMBER 5, 1965
WORLD CHAMPS



This picture is a bit blurry, a bit grainy, but it captures a very important moment in British cycling history. This is when Tom Simpson knew he would become Britain's first-ever elite world road race champion, some 46 years before Mark Cavendish repeated the feat in 2011.

It's the last lap, and Simpson is leading on the hardest hill of a tough circuit. He is at the top of his form, and has only attacked twice in the race — once to cross to the winning breakaway, and once to leave it. The only rider that was strong enough to

follow his second attack was Rudi Altig of Germany.

The pair quickly built up a good lead, with Altig, a Classics winner and track world champion, riding so hard on the flat sections Simpson asked him to slow down. But the British rider was better on the hills, and while he led from the bottom to the top of this one, pushing a huge gear, Altig asked Simpson to slow down. Simpson said afterwards that when Altig did that he knew he would win.

At the summit they spoke, and agreed to settle the title in the fairest way

possible. They would continue working together to ensure they held off the chasers until one kilometre to go. At that point they would then split and decide the race in a sprint, with no rider taking the other's slipstream.

And that's what happened. Only Simpson had the confidence to make his move right at the point of separation. He quickly gained four lengths on Altig, put his head down and went for it. Altig couldn't close the gap. Simpson was world champion.

Written and compiled by Chris Sidwells



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***James Shrubsall* takes a trip across the Somerset Levels to Cheddar Gorge, returning along a dragon's back of punishing climbs**





Were you to pick a handful of British cycling destinations off the top of your head, you might choose the heartland of

South Yorkshire as your opening gambit. Followed perhaps by neighbouring Yorkshire Dales, the Brecons, Dartmoor. Even the Surrey Hills might get a look in. One place unlikely to feature is Somerset.

It's just not, well, obvious enough. And much of it is flat (article 1, ladies and gentlemen: the Somerset Levels). That's not to say it's a featureless wasteland — anything but. With a scenic coastline, rolling hill ranges and iconic features such as Cheddar Gorge and Glastonbury Tor there's plenty on show, and for the cyclist looking for a

challenge, knee-tremblers such as Porlock Hill and Dunkery Beacon promise to find out any weakness in even the fittest riders.

Mercifully, today's ride is less about hardship and more about kinship and the camaraderie of the road. Avoiding the brutal slopes of Exmoor and the Quantocks, we're to make our way north across the Levels as far as Cheddar, where the route about-turns and loops back south via 'Glasto'.

Much of it is easy rolling terrain, but it's not a ride to be approached complacently. Cheddar Gorge is one of the best known cycling climbs in the area, and not only because of its geological uniqueness — at more than two miles long, with some tasty gradients early on it's a substantial challenge.

Ham Hill too, near the end of the route, offers some of the best views in the area at its summit, but we'll have to sing for our supper on the steep grades — especially after nearly



A bit of last-minute bike tinkering before the start



The Somerset Levels provides a nice rolling start to the ride

in the saddle, any hardships to come shifted to the back of our minds.

I've loaded the route onto my Garmin, but technology is sometimes no match for local knowledge, and between them Ian and Rob take over the route finding almost from the start.

Left hanging

Eight miles gone, we pass under the Hanging Chapel in Langport. It's a fascinating piece of architecture — a 13th century chapel which straddles the road. Situated at the top of a shallow hill, it's no longer a place of worship but I'd like to think that had there been any morning prayer-goers inside they might have looked down, paused and said a quick prayer for the blue-clad bike rider who's been distanced by his ride mates to the tune of around 10 bike lengths.

That's right folks, Rob and Ian have dropped me already.

I'm not worried though because, as dictated by rule one (my rules that is, not that Velominati nonsense), I've started easy with the intention of finishing strong. I inwardly congratulate myself on my restraint as I spin over the top to rejoin Ian and Rob.

The going here is unremarkable, but perfectly agreeable and very light on traffic. Being a coastal plain, the Levels are given over in the main to farming and most of the land is used for grazing cattle. The villages though, are the real jewels in this wetland crown, thanks in part to



THE RIDERS

James Shrubsall

Ditched the cut and thrust of racing in search of sportive absolution and to dedicate more time to the consumption of coffee and cake



Rob Webber

Having been riding for just under two years, Rob is a member of Somerset Road Club and pilots a Time Ulteam RXR that you could see your face in. He has completed the Somerset Coast to Coast and the Exmoor Beauty sportives.



Ian Green

Longtime rider Ian has ridden his bike all over Europe, and has a particular fondness for mountains. He's not averse to riding the odd time trial either, and like Rob he is a member of Somerset Road Club. Has been known to commute from his home in Somerset to his office in London — by bike.



80 miles of riding. Other climbs too, lurk on the return leg. We'll be acquainted with them soon enough.

As my ride buddies and I assemble in the pleasant village square at South Petherton, the day's challenges are at the forefront of my mind. Rob and Ian, two local boys who ride for Somerset Road Club, have offered to show me around the route and bestow a bit of local wisdom. They look alarmingly lean and eager, their bikes buffed to a mirror finish, and as we pedal away from South Petherton's chocolate box charms I can't help feeling rather underprepared.

Cheddar Gorge is the day's main appointment, a glance at the map suggesting it comes at around half-distance, but first we have to dispatch with the Levels. The weather is not unkind — a little overcast but quite bright, and we make the easy small talk of any group of riders embarking on a long day

“At more than two miles long with some tasty gradients, Cheddar Gorge is a challenge”



their unique and charmingly uniform architecture which is all crafted from local stone such as lias, and in the case of High Ham which we pass through as we near the 20-mile mark, hamstone. It's quarried at Ham Hill, which we'll meet later on. Like three Boxing Day diners facing up to a week of leftovers, we haven't seen the last of the hams.

The Levels are punctuated by strips of higher land, which is generally where the villages are built. Sensibly so, as the rest of the land lies practically at sea level and is very susceptible to flooding. This was demonstrated in devastating fashion in the winter of 2013/14, when nearly 30 square miles of land was submerged, villages abandoned and cut-off.

We're crossing these escarpments one by one as we head north, which turns the Screamer into a mini interval session — nice and easy on the Levels with a few minutes of harder climbing every handful of miles. It is a nice way to get acquainted with the ride — no big hills straight out of the blocks as can be found on many, less forgiving, sportives. Rob and Ian still don't seem convinced

by my abstemiousness with the watts though, and are generally to be found waiting for me at the top of each hill, patience and politeness personified.

Cresting Shapwick Hill, a typical Levels climb of moderate gradient between moderate hedgerows, we enter the village it was named after and are given one of our first vistas of Glastonbury Tor. Ever the bright-eyed tourist, I point it out to Rob, who dutifully humours me with tales of hippies cavorting around the tor every night of the year. "You get all sorts over there," he tells me. Working in Croydon, the idea of all sorts doesn't really faze me, though I'm not sure about dancing every night. Sounds harder than cycling to me. We pedal on.

Through Wedmore and Clewer the Cheddar escarpment hoves into view — we're almost there.

Much of the Levels is lush, green farmland

"No big hills straight out of the blocks as can be found on less forgiving sportives"



THE BIKE

I rode a Canyon Endurace CF, with a 105 groupset and the same carbon frame as the machine that won last month's *Cycling Active* bike test. Its friendly geometry means all-day rider comfort, while at the same time it features plenty of sportiness for when you want to give it the beans. The addition of Fulcrum Racing 3 wheels added an extra level of flightiness.



Were our senses better tuned we'd probably be able to smell the overpriced cheese and hear the thronging tourists, but as it stands we're more than happy to make do with the impressive view. It does represent a significant climb too, but this is no problem; after a couple of hours of mostly steady pedalling there's an eagerness to burn our quads a bit, especially on such an iconic ascent.

Two-pronged attack

Cheddar itself is a pretty unique place, and comes at the visitor with a double whammy of tourist attractions in the form of cheese and geology. Thankfully it's the free, beautiful one rather than the expensive, stinky one that we're interested in today, although it's not without a modicum of trepidation that we hit the lower slopes of Cheddar Gorge. I've ridden it once before, around 10 years ago, and I remember it being a challenging climb.

The Gorge — and the gradient — starts in the village, still flanked by an overbearing abundance of crowded gift shops and chintzy tearooms. Beyond the edge of town the







The sky-high rocks of Cheddar Gorge impose over the snaking road below



The trio ride wheel to wheel
as the road ramps up again

gradient offers up more bite than an 18-month vintage cheddar as the road meanders through a series of snaking bends on an almost perfect surface. The incredible rock formations more than make up for any leg pain though, rising, ruggedly beautiful, 400 feet into the air alongside us.

I have to admit that I'm paying far more attention to Rob's back wheel though, with Ian setting a really rather bothersome pace on the front of the line. As the incline becomes gradually more shallow, so Ian wicks the pace up further, until the three of us are somehow wheel to wheel to wheel, pushing 20mph up Cheddar Gorge. Where's your restraint now, Shrubsall? Actually, it's my legs I'm more concerned with, as at this

particular juncture they appear to be screaming blue murder below me. Like any good cyclist though, I don't like to mention it, maintaining the poker face of a man watching a particularly unremarkable weather forecast.

For several miles we're high (but unfortunately not dry — a light rain has set in) on the Mendip Hills, but what goes up must come down of course, and it's not long before we're screaming off the escarpment into a town-centre foray through Wells. With a name like this, there had to be some screaming somewhere on this ride after all.

Despite sporting a rather impressive cathedral, Wells can't help but feel rather plain Jane next to its near-neighbour Glastonbury. With hippies and witches roaming the town centre, which sits in the shadow of an enormous conical hill with a phone box-shaped church on the summit, Glasto is in a league of its own.

No self-respecting sportive could simply trundle past an enormous conical hill, and we duly set to work on its lower slopes. At an average seven per cent over half a mile, it's not a bank-breaking effort, but as Rob and Ian twiddle off ahead, I realise that my efforts on Cheddar Gorge have certainly taken me into my overdraft.

Let the suffering commence

Whereas the outward leg of the Screamer offers a genteel warm-up, the second half is a different beast. While not exactly shark-toothed, it certainly has bite, with a plethora of craggy fangs that look like they could pay off a dentist's mortgage. Back-loaded with suffering — no one could say we weren't getting the authentic sportive experience.

A happy bi-product of all these hills is that our surroundings are notched up a level or three in terms of interest. The Screamer's route planner Richard McLaughlin had told me it was a beautiful



Ploughing a straight furrow through the wetlands

ride and as we head south I'm really starting to agree with him. Nothing too extravagant, but one pretty village follows another, while out on the open roads in-between the flat arable pasture of the Levels has given way to a rolling landscape daubed with woodland. It doesn't hurt that the sun has come out either.

The scarcity of traffic is still a welcome feature, but in some places it seems to extend to a scarcity of people too. The town of Somerton is one of the most attractive places we've visited all day, but it's eerily quiet for a Saturday afternoon. Where is everybody?

Feeling like extras in a cycling-based remake of *I Am Legend*, we spin on through. Of course, one annoying imp that is never far away is the puncture fairy, who comes to pay Rob a visit as we attempt to exit the village of Long Sutton at 60 miles. The flat is violent and sudden, a

noisy pffft-pffft-pffft completely depressurising his rear tyre within seconds.

"Sh*t."

"It had to happen at some point."

Peeved but pragmatic, we set about fitting a new tube. I'm secretly glad of the rest, although I don't mention it. Poker face at all times, remember. The tube in place, I offer my CO2 canister. "It'll be quicker," I suggest, and as the tyre instantly inflates I inwardly give myself a pat on the back for offering such a brilliant solution. But my pride is punctured as dramatically as Rob's tyre as I unscrew the chuck and with it comes the valve core and the startling 'whoosh!' of 120psi exiting a tube in less than a second. Feeling rather abashed, I offer Rob an apologetic look and we try again with a mini-pump. Puncture politics eh? You could write a book on them.

Tyre inflated the good old-fashioned





The views from the top of Ham Hill are worth the leg burn

way we hit the road again, heading south. We soon reach a point on our loop where we're tantalisingly close — less than five miles — from the start in South Petherton. Despite protestations from my lower limbs, we must continue on our way and complete the southernmost part of the ride, including a stiff haul up what might just be the toughest climb of the day, Ham Hill.

If you ride this sportive yourself, I'd suggest you try very hard to ensure you don't have the inevitable 'bad patch' anywhere near this point. It would be far too easy to jack it in here and head for the car if you're not feeling good.

KNOW THIS

Getting there

The Screamer starts in the pretty village of South Petherton, located 10 miles west of Yeovil, just off the A303. If driving, use the A303 from the east or west (it stretches from Basingstoke to Exeter), or the A37 if approaching from north or south. Nearest train station is at Yeovil, where, if you're feeling particularly extravagant, there's also an airport.

Bike shops

The Bicycle Chain, Staplegrove Rd, Taunton.
Open 9-6 Mon-Sat, 10-4 on Sun.

Also has branches in Bridgwater and Weston-super-Mare.

01823 252499,
www.bicyclechain.co.uk
Rock n Road, Merlin Rd, Yeovil.
Open 9.00-5.30 Tues-Fri, 8-4 Sat, closed Sun, Mon. 01935 431937,
www.rockandroaduk.com
Entry fee is £24; go to www.grandtourcycling.co.uk to book your place.

Kit

It's a November ride, so not taking a waterproof is tantamount to doing a rain dance. Prepare for all weathers.

We're entering the last 20 miles of the ride — that otherworldly section of any long-distance sportive which seems, somehow, to last far longer than your common-or-garden 20 miles. This final stage usually boasts a 'signature' climb, and the Screamer is no different in this respect.

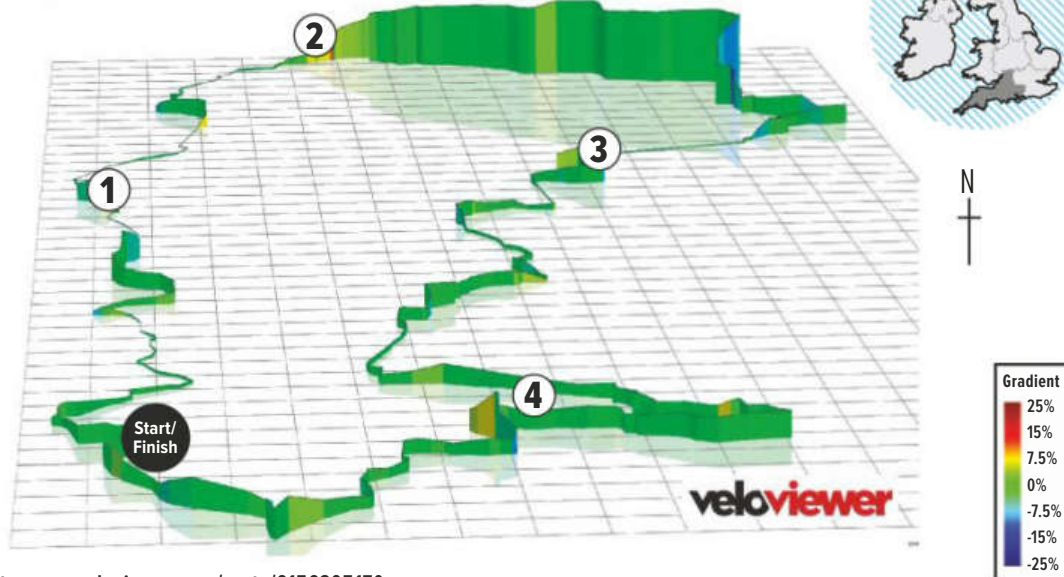
Beginning its ascent in the village of Stoke-sub-Hamdon, Ham Hill climbs steep and arrow straight for 500 metres all the way to the summit. At this point there's no pretence to be made — my legs have given up the ghost. Even on the shallower grades they have little to offer, and Ian and Rob quickly distance me. The Canyon's 32 sprocket finally comes into its own, and I snick the chain into bottom gear and twiddle steadily upwards as Ian and Rob play out their own personal battle in the tree-lined 20 per cent gradients near the top, before bursting out into sunshine and the best view I've seen on the bike for a while.

We pause at the top a for a short time, taking it all in and feeling pretty satisfied with a job well done, but with more than 10 miles to ride, we're far from done for the day. Southwards we continue, over a succession of seemingly interminable rises, before we finally reach the bottom of our loop near Crewkerne and all but double back on ourselves, headed for South Petherton.

Like a vanquished boxer determined not to go down without a fight, the route flails at us with three nasty little hills at us in the final six miles, and it's only as we enter the outskirts of South Petherton, with my car in sight, that I dare to feel home and dry at last.

THE ROUTE & KEY CLIMBS

The Screamer is a relative newcomer to the sportive world and with its pastoral prettiness errs on the gentler side of brutal, making it an ideal season-closer. But with nearly 2,000 metres of climbing over its 82 miles — much of it packed into the latter stages — it's challenge enough for any rider. Entry fee is £24; go to www.grandtourcycling.co.uk to book your place.



For a Veloviewer link go to www.veloviewer.com/route/6156295170

CLIMBS

1 Mudgley Hill

The perfect opening gambit. Not tricky or particularly steep, Mudgley snakes up between hedgerows on a quiet B-road. The Strava KoM is owned by domestic pro Marcin Bialoblocki, whose 19.8mph average up the climb puts my 9mph effort in the shade. As I say, I was obeying my own rule 1.

2 Cheddar Gorge

The eggs and bacon to this ride's Full English Breakfast — the centrepiece without which it wouldn't be the same. It's an iconic climb that should be on every Brit's bucket list, and while it's easy enough compared to some, the scenery in which it's set affords it legendary status. Strava's top five is peppered with pros. Needless to say, none of us got near them.

3 Glastonbury

No Cheddar but boasting an undeniable charm, the traverse around Glastonbury Tor takes in farms and orchards before depositing you at the bottom of the top of the knoll, where you realise for the first time that what looked like a pillarbox sized stone on top from a distance is actually a sizeable church. Testing in places but a steady rhythm will win out. Anything faster than 14.2mph up it will net you the Strava KoM.

4 Ham Hill

The final big test, requiring small gears or big legs — preferably both if you can find them. Straight and steep, the panoramas at the top are worth the effort. Of our trio, Ian got nearest the KoM, 1.41 with 2.43 — a very creditable ride after more than 70 miles in the saddle.



Map data ©2015 Google



[Route map and profile is available at www.grandtourcycling.co.uk]





***Hannah Bussey* explores Dorset's rolling Purbecks and Jurassic coastline as she tackles the epic route of November's Bitter Beast sportive**



THE RIDERS

Hannah Bussey

Ex first-cat rider and South East Divisional winner. International UCI 2.2 rider and Belgian kermesse survivor. Previous records in hill-climbs, a solo LEJoG finisher and once rode a lap of Majorca on a whim.



Jo Mondon

Only female rider for Pedal Heaven Race Team. Previously National Masters Cross-Country Champion and South East Divisional winner. Regularly found on the podium for all cycling disciplines from XC MTB to track racing.



It's raining. Not just a bit. I'm talking biblical proportions. It's been raining since Monday morning; we rearranged the ride for today, Wednesday, because the Met Office suggested it would be drier. As I drive us down to the ride start point, there's an awkward silence in the car.

My riding companion Jo has taken a day off work on the promise of a beaut of a ride down in Dorset for getting in some cheeky midweek miles. The only noise is the pounding of rain and windscreen wipers on full whack — struggling to clear the constant deluge of water. I'm desperately trying to think of a positive statement to cheer our spirits, but end up just blurting out "sorry".

"I'm so glad I bought new shoes," Jo responds. I too have brand new sparkly white shoes, but decide now's not the best time to raise it — since I got us into this. The pain of christening my bright white disco slippers must remain, silently, my problem.

All but an island

We're heading down to the Tank Museum at Bovington, the starting place for the Wiggle Bitter Beast. In theory it's an all-weather route, but we've just had the wettest August on record, followed by a three-day monsoon. Course conditions are anything but average. By the time we get there, Bovington is all but an island. Not only are the surrounding roads heavily flooded, but so is the museum.

We have to wade through ankle-deep water to get into the cafe to prepare ourselves. After cross-checking several forecasts, we're in agreement that it should get better after midday, but for now, despite the farcical nature of the roads, there's nothing else to do but just get out there.

As luck would have it, by the time we've stopped faffing with kit and bikes, the rain has let up to a gentler sprinkle and we roll out feeling slightly more optimistic about the ride ahead. The route is roughly split into thirds, with undulating moorland and tree-tunnel lanes at first, followed by the bigger hills of the Purbecks, before heading back to the moors to finish off.

It's unknown territory for me, even though it's not miles from home; with no big stage races or epic events down here, it's never been on my radar. I'm looking forward to smashing out a few miles with Jo, who, having just returned from a seven-day stage race riding up and down mountains in British Columbia, in Canada, is naturally looking forward to owning a few climbs.



Hannah is definitely *not* laughing at Jo's attempts to keep her new shoes dry...

Jo and I have known each other for years. We both started on the local and then national road race scene around the same time, and more recently we became 24-hour mountain bike race team-mates, which is standing us in good stead. Many a polished roadie may have had a sense of humour failure over these first few miles. We're applying our off-roading skills as we set off over muddy banks and through sections of hub-deep floodwater.

Even so, Jo's still doing her best to preserve her pearly white shoes — half-cranking in deep sections, which is making progress painfully slow; the first 20 miles take an hour and a half. Any ideas we had about attempting to gain Strava QOMs are now null and void.

Ironically, we're following signs for various puddles: Tolpuddle and Puddletown. We're north of the Purbecks, and it's flat-ish so far. Having looked at the route map prior to the ride, I know we're set to get a few spectacular coastal views, but here the military influence dominates. The quiet and narrow roads run alongside tank test tracks and firing ranges; the volume of the firing tanks rocks us to the core.

“Many a polished roadie may have had a sense of humour failure by now”



Local town names couldn't be more apt

Sacrificial shoes

Aware that our pace has so far been processional, we decide to stop crystal cranking through the vast lakes of muddy water and up the wick on the pace. Our shoes are instantly submerged at the next overflowing river. I'm praying that we don't encounter any wheel-stopping potholes or lidless manhole covers.

Our sacrificing of box-fresh shoes appeases the clouds, and the rain finally ceases. We're now riding at a decent pace through sweet-smelling moorland and pine trees.

Up and down

When eventually we head south, the moors and enclosed lanes end abruptly. As we cross over the A352, we're into the first proper



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Cycling
WEEKLY



**Quiet lanes cut through
the verdant moorland**

hills for the day. The first is flanked by open fields on either side and, with little hedgerow to speak of, we have nice view of the steep incline ahead. It's an out-the-saddle and pop-over-the-top job.

The upside of riding with your team-mate is that you know how to roll and flow with each other. The downside is that you can't help but attack each other; every ride is no-holds-barred. This first real challenge is like a red rag to the bull; we both drive it over the top — opening up the legs and lungs.

Once over the top, it's straight back down again. The open nature of the landscape allows us to see far down the road, so it's an elbows-in and on-the-drops descent. Through chocolate-box villages, up a more sociably paced climb and we finally have views of the coast and, specifically, Lulworth Cove. The respite is short-lived, however;

we're once again hurtling downhill. Another picturesque village with its thatched cottages flies by without time to take them in. Jo has her game face on and is now determined to gain, if not a course record, at least some intermediate stages.

Warning bells and saving bacon

We turn inland from the coast and climb out of West Lulworth, before thoroughly enjoying the downward trajectory with full gas through and off. Unbeknown to me at this stage, I'm causing some irrecoverable damage. The warning bells should have started ringing at the halfway point on the biggest hill of the day. I'm getting dropped.

I try to convince Jo that I was busy taking in the impressive views of Creech Grange, a huge stately home just at the foot of the Purbeck Hill. I bury



doubts about my form and crack on, grinding my way to the top of Grange Hill, Jo a few metres ahead. As I see her slow, I assume she's taking in the impressive 360-degree vista across to the coast and inland across the rest of the Purbecks. As I reach her, though, I realise that the wind has in fact brought both of us to a near standstill. It's against us, but not head-on, meaning we're having to lean into it, which makes taking the left hairpin corner rather sketchy.

For every yin, there's a yang; finally the headwind is on our backs and we're beginning 8km of descending. The sun and wind has done its best at drying out the road, but there's still damp patches and a fair amount of detritus and debris scattered around from this morning's storm. Jo's leading, and after a couple of rapid, grin-inducing

“The warning bells should have started ringing a while ago. I'm getting dropped”

kilometres, she's suddenly heavy on the brakes for a right-hander that's tighter than she anticipated and awash with gravel.

I hear her shout something, but can't quite make it out before I glimpse the white chalk pebbles all across the road right on the apex of the turn. I'm coming in too hot to change trajectory and simply have to try and load my front wheel in the hope my tyres find a channel through the gravel. I'm more than a little bit relieved when I





**Dry roads and smiles
exchanged for grimaces:
Must be near the finish...**



realise I've overtaken Jo and somehow managed to stay rubber-side-down.

Jo's not sure quite how I carved my way round the corner but I'm convinced my bacon was saved by an 11th-hour, late-night tyre change to a set of 25mm Michelin Pro 4 Service Course. It serves as a stark warning to expect the unexpected, especially when in uncharted waters.

A few more kilometres of rolling down and we're greeted by the impressive vision of Corfe Castle. Even if you're not into historic ruins, you can't help but be in awe of this near-900-year-old castle. As we turn right and join the busy A-road through the bustling tourist town, it suddenly dawns on me that this is our first interaction with any form of traffic. We've had the lanes to ourselves all day.

We encounter our first, and as it turns out only, other cyclist — who overtakes us. Now, I'm not annoyed at being overtaken by a scruffy, baggy-arm-warmer-wearing rider — I'm no bike snob — but he didn't even say hi or nod, and that's bad road karma.

Elastic snaps

Jo and I exchange knowing glances and set off in hot pursuit. We catch him at the bottom of what appears to be another gentle rise and use the momentum gained from the previous descent to overtake at about 30mph while shouting an over-the-top, point-making "hello". We're doing our best to make the subsequent climb look effortless — until I spot the 16 per cent sign. I know I'm in trouble.

As the road steepness increases, I cannot play out the facade any longer; I have to slot in behind

Jo. The scruffy dude has regained contact and is now attached to my rear wheel. With her racer's sixth sense, Jo is acutely aware of the wheelsucker and starts drilling it on the front. I'm doing my best to hold her wheel, but the elastic is stretching.

Suddenly Mr Scruffy accelerates past me with a cadence of about 130rpm. It's the physical equivalent of a double puncture. The elastic snaps; I drop anchor and get royally dropped by the pair of them. By the time I crest the top, Jo has spun round and is coming back down the hill to find me, worried that I'd had a

**Road to ruins:
the grippy drag
to Corfe Castle**

THE BIKE

I rode a Specialized Amira SL4, from 2014, with Shimano Ultegra, and a Praxis chainset. Wheels were Fulcrum Racing S-5, tyres were 25mm Michelin Pro4 Service Course. The wheels flexed maybe a little too much, but otherwise it's a great bike for the route — compliant and comfortable while being light and stiff for the climbs. Gears were 52/36t and 11-25t.





Stunning wild landscapes do little to ease tired legs

mechanical. "Only of the legs," I tell her.

Thankfully it's all downhill to Swanage, where, having caught Mr Scruffy on the descent, we decide to forgo the awkwardness of overtaking him again and opt for a piano pace along the seafront to take in the infamous Jurassic coastline.

It's another short-lived sea vista, as we're once more with our back to the sea and on the up. We're 20 miles from base and I'm done. The giddy

pace-pushing to make up for our slow start has hit me hard, and I've not taken on board enough fluids or gels. No more through and off for me; I'm just through. I'm giving 'allez' or 'ho' instructions to Jo as if she's a derny, and my every thought is just about hanging on.

Whereas this morning's two-up time trial was conducted with the aim of leaving a big enough gap to avoid the front rider's spray, I'm now firmly planted in the direct line of fire, being constantly peppered with Belgian toothpaste. My face must look a picture, but I couldn't care less right now.

We finally make it back to the car. Jo is casually chatting to photographer Roo, but I'm in a box. Seventy miles with no categorised climbs should have been knocked out before breakfast, but the delayed start followed by the flat-out pace then unrelenting hills has beaten me.

I slowly come round after some food and somehow manage to pack the car. It's another silent journey, but for an altogether different reason. I summon up the energy to blurt out another sorry.

"Sorry about blowing the doors off and sorry about your shoes".

"S'ok," says Jo, charitably. "I think they'll go in the washing machine. Besides, I actually really enjoyed today, in an epic kind of way. I think I might come back and give it another go in November, when the weather's better."

KNOW THIS

Climbing

With less than 1,300m of climbing spread over 70 miles, it's easy to get carried away early on, so be sure to judge your effort carefully. That said, it's still a fast ride and while a mid-compact chainset (52/36) will make the ride more comfortable, it's more than achievable on a 53/39.

Other kit

Being so far south and near to the coast means the roads seldom ice, although they can get slippery due to the chalky nature of the land, and expect gravelly corners. I found my 25mm tyres perfect for the

conditions, giving me plenty of rubber-to-road contact. The mixed terrain can see you running hot to cold in quick succession, so it would be well worth packing a lightweight jacket in a back pocket.

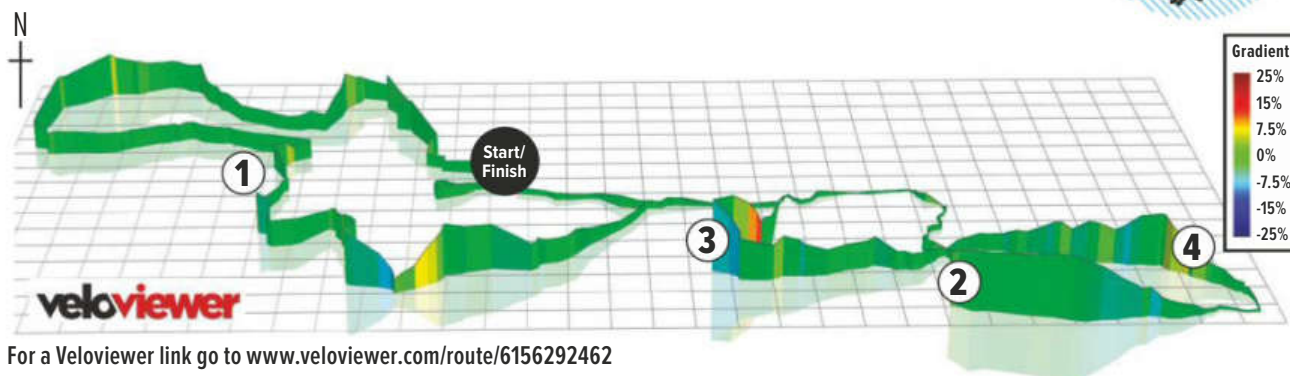
Where to stay

Accommodation is plentiful in the area, although can be expensive nearer the coast. It's somewhat off the beaten track in terms of access via motorway. It makes for a scenic drive, but takes longer than you think to negotiate towns and villages, so allow plenty of time to get down to the start.

THE ROUTE & KEY CLIMBS

The Wiggle Bitter Beast takes place on November 15, 2015 and starts at the Tank Museum in Bovington, Dorset. It's easy to find, with signs leading off the main A35 and

has plenty of parking. The museum is a day out in itself — ideal for combining a tough and challenging sportive with a family day out.



For a Veloviewer link go to www.veloviewer.com/route/6156292462

CLIMBS

1 Short and Snappy

The first real effort of the day is only 500 metres long with an average eight per cent gradient but ramps up sharply at the end. The best Strava time is 1.16, shared by three riders, who set it on the same ride in December 2013. Anything under 1.30 would be very respectable, and would get you on the first page.

2 Grange Road climb

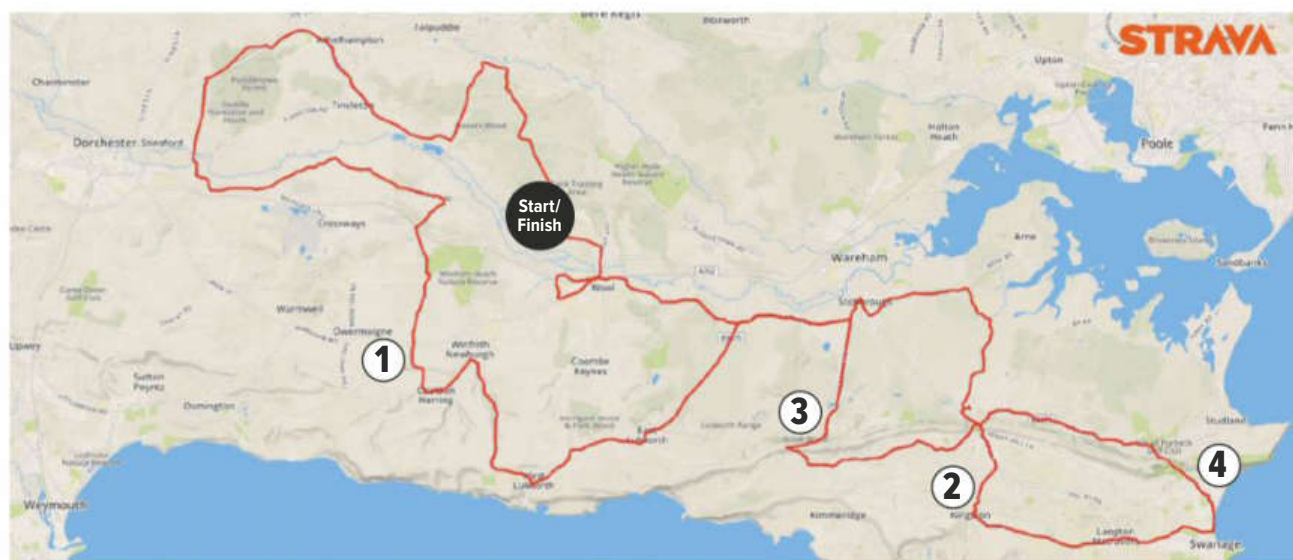
The biggest climb of the day at 3.5km with a gradient of approx 1.7 per cent for 2.8km. Innocuous enough, but the last 700m rears up to an average of 11 per cent and on to a leg-breaking 19.3 per cent in places. The fastest Strava times are under 8.30, but a sub-13 is a more realistic Bitter Beast time.

3 Kingston Hill

Another 500m climb, but with a 10 per cent average and a 16 per cent section. Coming so shortly after the Grange Road climb, and after eight kilometres of descending, it hits the legs hard. The Strava leaderboard would have you believe that a sub-1.40 is doable — but only off the back of much shorter rides.

4 B3351 climb

With 20km to go, the final climb of the day's maximum gradient of 13.3 per cent may seem benign, but even the fastest Strava times are around the five-minute mark — so it's not to be underestimated. Expect to take eight minutes on this 2km slog, so make sure you have something left in the tank.



Map data ©2015 Google



[Route map and profile is available at www.ukcyclingevents.co.uk/events/category/road]



Titanium road bikes

£2,999.99 — £3,634

For many, a titanium bike is right at the top of the wish list. The big question is, why?

Words: Christopher Hovenden, Henry Robertshaw Photographs: Mike Prior

What?

Titanium does not rust and is not prone to fatigue, which means the frame does not need to be painted to protect it from the elements. It is also a very strong material, and relatively light. Titanium frames are normally combined with a carbon fork to provide a compliant ride. Although you do see race-focused titanium bikes, many have a more relaxed geometry.

Why?

It is likely you have at least admired a titanium bike from afar. You are not alone. The number of people riding titanium bikes — attracted by the distinctive appearance and exclusive appeal — is on the rise. In terms of performance, carbon is lighter, stiffer and in theory gives better power transfer. Titanium bikes are often more comfortable than carbon, though, not much heavier, and less likely to fatigue and fail. Importantly for many, bare titanium stands out from crowd.

How?

To find the best mid-range titanium bike, we have put three quality bikes through their paces in a variety of circumstances. Each has been ridden on everything from sedate rides in the countryside to competitive club runs — involving sharp descents, challenging climbs and the all-important sprint for signs.



Enigma Evade £2,999.99

A titanium frame with full Ultegra groupset for £3,000 is an attractive deal.



Van Nicholas Zephyr £3,634

The Zephyr is an all-rounder and comes equipped with Mavic SLR Ksyrium wheels.

Lynskey R240 £3,449.99

A frame that was born in the USA and hung with a mixture of Shimano components.



Van Nicholas Zephyr £3,634



Performs well on fast, short rides and longer trips

The Zephyr is designed by Van Nicholas to be an all-rounder that is adept at fast-paced events and all-day rides.

Frame

Like all of the mid-range titanium bikes on test, the frame is made from 3Al/2.5V grade titanium. This, combined with the SLR carbon fork, provided a solid and compliant ride.

The frame has a fairly relaxed geometry but did not hold me back when I wanted some zip.

The sloping top tube, slender

seatstays, hand-brushed finish and neat welds combine to provide a sleek and minimalist look.

Specification

The Zephyr has some impressive kit. The full Shimano Ultegra groupset performed very well. Likewise, the Ksyrium SLR wheels are top quality — Mavic's Exalith rim technology provided consistent braking and the wheels were both light and stiff without transferring every bump.

Ride

The Zephyr is both an adept

Specification

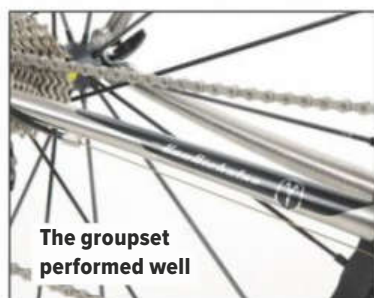
Frameset 3Al/2.5V grade titanium, VNT SLR carbon fork
Gears Shimano Ultegra 11 speed, 11 25t
Chainset Shimano Ultegra 50/34t
Brakes Shimano Ultegra SSC SLR
Wheels Mavic Ksyrium SLR
Tyres Mavic Yksion Pro Griplink SSC front and Pro Powerlink rear, 23mm
Bars Fizik Cyrano R3
Stem Fizik Cyrano R3
Saddle Fizik Antares R3 Kium with carbon braided rails
Seatpost Fizik Cyrano R3
Weight 7.88kg/17.37lb
Size tested 56
www.vannicholas.com

climber and sprinter. It responded really well when I needed an injection of pace up a steep incline and it didn't flex noticeably when I was sprinting for road signs. It was also pretty comfortable after long hours in the saddle and a pleasure to ride. The only negatives were that the brakes took a while to bed in and to prevent the seatpost from slipping you had to really tighten the seat clamp.

Value

The Zephyr is the most expensive bike on test but it is also the lightest and has some of the best kit. The 3Al/2.5V titanium frame, married with high quality components, unquestionably provides a good quality ride. Throw into the mix that it scores highly on the looks front, for just over £3,600 this is a competitively priced titanium steed. *CH*

9



The groupset performed well



Brakes took a while to bed in

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2014 CANNONDALE SUPERSIX EVO 105 6
Evo frame and fork, 20 speed Shimano 105 gearing and Tiagra brakes, Shimano RS01 wheels. Rrp £1700 now £1049.99



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Enigma Evade £2,999



A great bike for the money, and made in the UK too

There's a lot to like about Enigma. The East Sussex company both designs and builds its titanium frames right here in the UK, so flawless quality control should go without saying.

Frame

On the face of it, the Enigma has a pretty racy frame geometry, living up to its billing as a 'fast endurance' bike. The relatively short, 16cm head tube ensures you can get a pretty low position, while the 40.9cm chainstays and 98cm wheelbase should both help power transfer and handling.

However, on the road, this is a much more balanced frame, with the race bike set-up and the natural qualities of titanium creating a good all-rounder.

Specification

Given that the Enigma is the least expensive bike on test by some margin, the spec is very impressive. A full Shimano Ultegra groupset means close to perfect shifting and braking, though I'd have gone for a 52/36t chainset to go with the 11-32t cassette. The Mavic Ksyrium Elite wheels are also very good — not as light or stiff as their big brothers on the

Specification

Frameset Mavic 3AL/2.5V, Enigma carbon fork
Gears Shimano Ultegra 11 speed, 11 32t
Chainset Shimano Ultegra 50/34t
Brakes Shimano Ultegra
Wheels Mavic Ksyrium Elite
Tyres Mavic Yksion Pro Griplink front, Powerlink rear, 25c
Bars Enigma 6061 Series
Stem Enigma 6061 Series
Saddle Enigma
Seatpost Enigma carbon
Weight 8.01kg/17.37lb
Size tested 56
www.enigmabikes.com

Van Nicholas, but this updated model has a wider rim to ensure a comfortable ride with 25mm tyres.

Ride

There's very little to complain about with the ride of the Evade. The frame is comfortable, and is really helped in this regard by the wide-rimmed wheels and 25mm tyres. Handling is also very good, certainly lively enough for a criterium circuit. However, I would have liked a little more stiffness in the bottom bracket to make accelerating sharper. The weight of the wheels is a limiting factor, unlike on the Van Nicholas.

Value

OK, so a quid under three grand is hardly cheap, but for a good-quality titanium frame with a decent spec, it's very good value. Indeed, you can get the same frame but with Ksyrium Equipe wheels and Shimano 105 groupset for £2,699. Impressive. *HR*

8



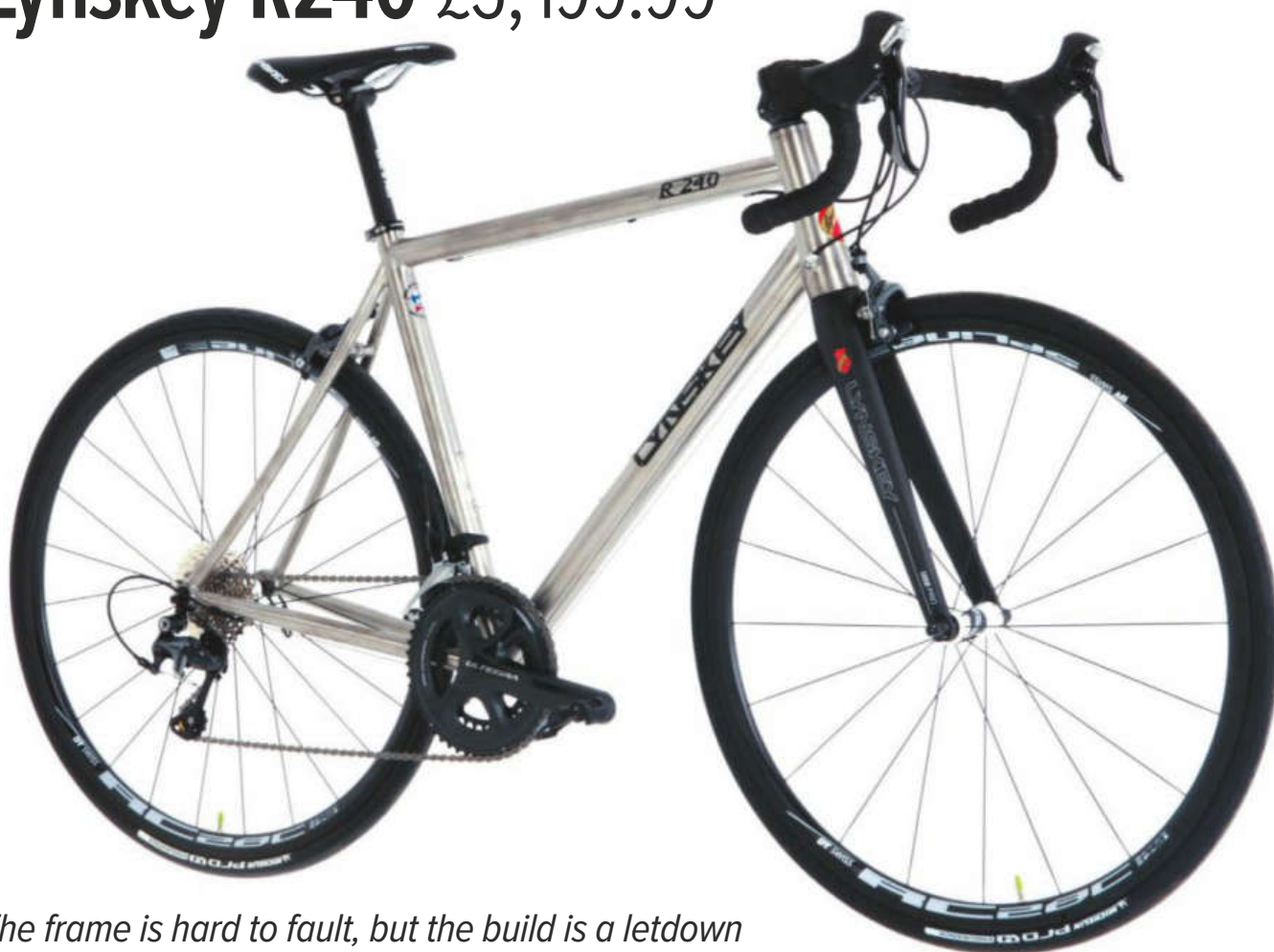
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Lynskey R240 £3,499.99



The frame is hard to fault, but the build is a letdown

Chattanooga, Tennessee might not seem like the obvious place to look for a new bike, but this Upper South city is home to the Lynskeys, a family with titanium running through their veins. Having run Litespeed for 13 years, they sold the firm to produce frames under their own name.

Frame

Aesthetically, the Lynskey might divide opinion, but I really liked it. The Lynskey badge is screwed into the down tube to give a slightly industrial look, which suits the bike really well; it stands out from the crowd.

The geometry is typical, making it very easy to get on with straight away, and as you'd expect from titanium, comfort and ride quality are superb.

Specification

The Lynskey comes with a mish-mash of Shimano Ultegra and 105 components. It matters

not; 105 is so good nowadays that you'd be hard-pressed to notice any drop-off in performance. The only penalty you pay is on the weight front. The DT Swiss wheels are also a great match for the frame, being extremely



Frame is strong and comfortable



Ultegra chainset is a plus point

Specification

Frameset R240 3Al/2.5V titanium, Lynskey Pro Carbon Tapered fork
Gears Shimano Ultegra/105 11 speed, 11 32t
Chainset Shimano Ultegra 50/34t
Brakes Shimano Ultegra
Wheels DT Swiss RC28 Spline C
Tyres Michelin Pro4 Endurance V2 25c
Bars 3T Rotunda Pro Alloy
Stem 3T Arx 11 Pro Alloy Road
Saddle Lynskey Sport Flow
Seatpost 3T Iconic Pro Inline Seatpost
Weight 8.4kg/18.5lb
Size tested M/L
www.hotlines.co.uk

comfortable and reasonably light, great for all sorts of riding.

Ride

Comfort is the Lynskey's strong suit, soaking up road vibrations, at front and rear, with very little fuss. I was pleasantly surprised with the frame's performance at speed too. Get going on flat and rolling roads and it is a pleasure to ride.

The only downside comes when you hit the hills. At 8.4kg, this is quite a heavy bike, and it shows; on steeper gradients, this is far from the most sprightly steed.

Value

For the money, you get a very good frame, but I would have liked to see a slightly better spec. Although the combination of components works well, I would have liked to see full Ultegra, given the £3.5k price. Equally, higher-spec wheels would have really helped the Lynskey feel a little lighter in the hills. *HR*



Verdict

Van Nicholas Zephyr wins

There comes a time in every cyclist's life when he or she wants to buy *that* bike. It might not necessarily be the fastest, the stiffest, or the lightest, but it will look great, be great to ride, and keep going for ever.

Bike for life

For that bike, from what we've seen on this test, titanium is a really fantastic option.

At the heart of all of these bikes

is a frame that offers excellent ride quality. The 3Al/2.5V titanium alloy (meaning it is made from three per cent aluminium and 2.5 per cent vanadium) used for the tubing on all three provides an excellent balance of stiffness and comfort while still being strong enough for long-term longevity, while the quality of the welds, a crucial aspect with titanium, cannot be faulted anywhere.

This means that all of these bikes are perfectly suited to British

roads. On a super-stiff carbon bike, you might be happy putting in big miles on smooth Continental tarmac, but for the rough-and-ready roads of old Blighty, the natural suppleness of titanium really does make a significant difference, helping to absorb vibrations and thereby lessening fatigue — especially upper body aches — during long rides.

Beyond the frame

Such is the superb performance of both Shimano Ultegra and 105, it's hard to complain about the specifications of these bikes.

The Lynskey is the only one of the three not to include a full Shimano Ultegra groupset. Its odd selection of Ultegra and 105 components is a little



Van Nicholas:
lighter and racier

disappointing, considering its price, which on some carbon bikes will buy you Dura-Ace.

The other two bikes are much more closely matched in spec. Both come with Shimano Ultegra, which is close to perfect in every conceivable way, with the only difference coming in the wheels. Much of the extra £600 on the Van Nicholas goes towards those fancy Mavic Ksyrium SLR wheels, which certainly do a lot to aid acceleration and performance in the hills.

“The Van Nicholas owes a lot to its Mavic Ksyrium SLR wheels, which aid performance, especially for climbing”



However, although the Ksyrium Elite on the Enigma are undoubtedly slower, they're still exceptionally good wheels. They've been updated for 2015 in a way that makes them a perfect match for the Enigma's titanium frame. The wider internal width works really well with 25mm tyres, allowing you to run them at lower pressure, thereby greatly improving comfort.

Race-ready?

All three of these bikes are designed to be great all-rounders, for riders who enjoy just as much mixing it in midweek crits as they do lapping up long, weekend miles. Though all of the bikes here thrive at the latter, not all of them are exactly race-ready.

Both the Lynskey and the Enigma certainly seem to be more suited towards all-day riding. In the hills, the Lynskey is the most sluggish of the three, which is perhaps no surprise considering it is giving away 600g to

the Van Nicholas. That said, we found it to be very adept on the flat, and once you get it going it really holds its speed well, bounding along with ease even on dodgy road surfaces.

The Enigma is also good on the flat, and although power transfer could be a little better, it makes up for this with its excellent handling, which gives you confidence to carry more speed into corners.

In conclusion

It's the Van Nicholas that really excels at putting the 'fast' into 'fast endurance'; this is the bike that will appeal to those with a taste for racing. Helped a lot by those lightweight Mavic Ksyrium SLR wheels, it's really quite an agile bike — quick to accelerate, even on steeper gradients. This superiority extends to the flat too. Head-to-head with the Enigma and Lynskey, the Zephyr would no doubt win a sprint for a sign (or a chequered flag) too.

Van Nicholas Zephyr £3,634	Enigma Evade £2,999	Lynskey R240 £3,499
Frame ■■■■■■■■ 9	Frame ■■■■■■■■ 8	Frame ■■■■■■■■ 8
Specification ■■■■■■■■ 9	Specification ■■■■■■■■ 8	Specification ■■■■■■■■ 7
Ride ■■■■■■■■ 9	Ride ■■■■■■■■ 8	Ride ■■■■■■■■ 9
Value ■■■■■■■■ 8	Value ■■■■■■■■ 9	Value ■■■■■■■■ 8
Distributor www.vannicholas.com	Distributor www.engimabikes.com	Distributor www.hotlines.uk.com
Frame 3AL/2.5V grade titanium	Frame Frame 3AL/2.5V	Frame R240 3AL/2.5V titanium
Fork VNT SLR carbon	Fork Enigma carbon fork	Fork Lynskey Pro Carbon Tapered
Size range 50, 52, 54, 56, 58, 60cm	Size range 53, 55, 56, 57, 59, 60	Size range XS, S, M, M/L, L, XL
Weight 7.88kg/17.37lb	Weight 8.01kg/ 17.62lb	Weight 8.4kg/ 18.52lb
Groupset Shimano Ultegra	Groupset Shimano Ultegra	Groupset Shimano 105 levers/ f mech, Ultegra chain set, cassette, r mech
Gear ratios 11 25t, 50/34	Gear ratios 11 32t, 50/34	Gear ratios 11 32t, 50/34
Wheels Mavic Ksyrium SSC SLR	Wheels Mavic Ksyrium Elite	Wheels DT Swiss RC28 Spline C
Brakes Tektro R741 brakes	Brakes Specialized Axis 1.0	Brakes Shimano Ultegra
Tyres Mavic Yksion Pro Griplink SSC front and Pro Powerlink rear, 23mm	Tyres Specialized Espoir Elite 25mm	Tyres Mavic Yksion Pro Griplink front, Powerlink rear, 25c
Bar Fizik Cyrano R3	Bar Specialized Comp alloy	Bar Enigma 6061 Series
Stem Fizik Cyrano R3	Stem Specialized Comp alloy	Stem Enigma 6061 Series
Seatpost Fizik Cyrano R3	Seatpost Specialized CG R, FACT carbon 27.2mm	Seatpost Enigma carbon
Saddle Fizik Antares R3 Kium with carbon braided rails	Saddle Body Geometry Toupé Comp Gel	Saddle Enigma

SIZE TESTED: 56

A	B	C	D	E	F	G	H
55cm	73.5"	72.0"	18cm	38.6cm	41.5cm	58.5cm	99.7cm

SIZE TESTED: 56

A	B	C	D	E	F	G	H
56.5cm	73.25"	72.5"	19cm	38.7cm	41.5cm	58.9cm	101cm

SIZE TESTED: L

A	B	C	D	E	F	G	H
56cm	73"	73"	16cm	38.4cm	40.9cm	57.4cm	98cm



Carbon race bikes

£1,899 to £2,000

Whether you're chasing Strava KoMs or even contemplating a foray into racing, we've lined up five fast bikes that won't break the bank

Words: Henry Robertshaw Photographs: Daniel Gould



What?

Carbon-fibre has become the frame material of choice over the last 15 years. A good carbon frame really does offer everything you'd want from a road bike frame: it will be light, stiff, and, providing the manufacturer has done its job, strong and comfortable too. And for £2,000 you should be able to pick up an excellent one with a good quality spec to boot.

Why?

If you want a bike that will have you riding as fast as your legs will allow, then carbon really is the only choice. Generally lighter than other frame materials, you'll soon be dancing up the hills (especially if the bike is equipped with some half-decent wheels), while a stiff front end and bottom bracket should improve handling and make sure every watt of effort is transformed into forward momentum.

How?

We've made the most of the final throes of summer to put these bikes through their paces over the course of a series of rides, with everything from the steepest of climbs to beautiful sweeping descents. Of course, these have taken in some typically rough British roads to make sure that comfort is up to scratch too.



TESTED



Vitus Vitesse Evo £1,899

A racy pro-level frame made to be ridden fast over all terrains



Specialized Tarmac Comp £2,000

A much-loved classic; an all-round racer for the everyman



Raleigh Militis Pro £1,950

Understated looks, but with a frame that the sprinters will love



BMC Teammachine SLR02 105 £1,899

Beautiful blue frame, with a ride that will devour the hills



Forme Thorpe Comp 1.0 £1,999

Ultegra-equipped, with quality wheels and a comfort-oriented seat tube and seatpost

Vitus Vitesse Evo £1,899



A fine, race-ready frame that rewards hard riding

Vitus has been making carbon-fibre bikes since the early 1980s, so you certainly know that there's plenty of experience behind the Vitesse Evo.

Frame

The frame is exactly the same as that used by the An Post-Chain Reaction pro cycling team, so it's no surprise that this is a pretty racy bike. Almost every part of the Vitesse is designed for optimum power transfer, with a boxy, oversized down tube and chainstays, and a huge BB386 EVO bottom bracket. The internal cable routing is also nicely done to give the bike a clean look.

Specification

Aside from the 105 cassette, the Vitus Vitesse Evo comes with a full Shimano Ultegra groupset. This is exactly what you'd want from a bike of this price point, offering faultless shifting and braking whatever the conditions.

The Mavic Ksyrium wheels are pretty good too, considering they only cost £350. They stood strong in the face of pothole-strewn roads and are reasonably light, which really helped when tackling the climbs.



Bottom bracket is built for stiffness



Ksyrium wheels are great value

Frameset High modulus T700 HM UD carbon
Gears Shimano Ultegra (105 cassette), 11 25t
Chainset Shimano Ultegra, 50/34t
Brakes Shimano Ultegra
Wheels Mavic Ksyrium
Tyres Mavic Yksion Elite
Bars Vitus compact
Stem Vitus
Saddle Prologo Scratch Pro
Seatpost Vitus
Weight 7.9kg/17.41lb
Size tested 56cm
www.chainreactioncycles.com

Ride

This is a bike that's at its best when ridden fast. Big power is rewarded with sharp acceleration whether you're dancing up a hill or opening the tanks in a sprint. The stiff front end helps when you swing the bike from side to side in mid-sprint and also delivers good handling, leaving a smile on your face as you sweep down descents, although the tyres aren't best suited to wet conditions. My only real criticism was that the ride began to feel a little harsh towards the end of longer rides.

Value

It's hard to fault the Vitus Vitesse Evo when it comes to value. £2,000 for a bike with a pro-level frame and a faultless groupset seems like a good deal to me. This extends to the wheels, which offer good performance for their price, with the only small sacrifice being the in-house bars, stem and seatpost. *HR*





Specialized Tarmac Comp £2,000



A stunning all-rounder that's good at everything it does

Few bikes have been as successful at the highest level than the Specialized Tarmac, so it's great to see technology and ride quality both filtering down to a lower price point.

Frame

In terms of geometry, the Tarmac Comp is the same as the top-end S-Works models so you can be sure of a low front end with the smallest stack of any bikes on test. You do, however, get a lower grade of carbon-fibre than the more expensive Tarmac models, although this mainly means a slight

increase in weight rather than any diminishment in the quality of the ride, which is superb.

Specification

For the most part, Specialized has equipped the Tarmac Comp with Shimano Ultegra. Shifters, derailleurs, and brakes are all from Shimano's second tier groupset and work excellently. The only deviation is with the Turn Zayante chainset. This works just as well as a standard Ultegra chainset, although aesthetically it isn't quite as attractive. The rest of the finishing kit is Specialized's own, all of which is decent for the price.

Specification

Frameset Specialized FACT 9r carbon
Gears Shimano Ultegra, 11 28
Chainset TURN Zayante by Praxis Works, 52/36t
Brakes Shimano Ultegra
Wheels Fulcrum Racing S4
Tyres Specialized Turbo Pro, 23mm
Bars Specialized Comp
Stem Specialized Comp
Saddle Specialized Toupe Comp Gel
Seatpost Specialized Comp Carbon
Weight 8.26kg
Size range 49-61cm
Size tested 54cm
www.specialized.com

Ride

There's an awful lot to like about the ride of the Tarmac Comp. For a bike with racing blood flowing through its gear cables it is surprisingly comfortable to ride, and I was happy using it for long weekend miles. It's not quite in dedicated endurance bike territory, but the Tarmac does an impressive job of soaking up most vibrations.

However, open the taps and the Tarmac really comes into its own. Accelerations are sharp and when you get up to speed it really wants to stay there.

Value

The Tarmac Comp offers exactly what you'd expect from a £2,000 carbon bike. The excellent frame is matched with equally impressive components that come together to form a very good bike. The wheels are the only thing that could be improved, although for the price they could be worse. *HR*



Turn chainset performs on par with Ultegra



In-house seating comes via the Comp Gel



Raleigh Militis Pro £1,950



A great frame that deserves a better spec to do it justice

From BMX Burners to 10-speed racers, Raleigh was a childhood narrative for many. But its modern bikes are no toys and can be found in the pro peloton; the Militis here is third from the top of its race line.

Frame

The frames are the same across the Militis range, so you know you're getting some pretty decent carbon for your money. However, despite this, it's certainly not a shouty frame, with the grey and black paintjob hardly making it jump out (although the next step

up in the range, the Militis Race, comes in neon orange).

Specification

The Militis comes with a SRAM Rival groupset that doesn't quite match the performance of the Ultegra or Athena parts on the other bikes. Shifting is reliable, but a little sluggish, and if you find yourself in the 28t and go searching for an easier gear, you'll find yourself shifting up — not exactly ideal. And while the Cole wheels hold up well to the battering of British roads, at nearly 2kg per pair, the Lite in the name is a bit of a misnomer.

Specification

Frameset Militis Speed Blend Direct Connect carbon fibre
Gears SRAM Rival 22, 11 28t
Chainset SRAM Rival 22, 52/36t
Brakes SRAM Rival
Wheels Cole Rollen Lite Wide (tubeless ready)
Tyres Schwalbe Durano, 25mm
Bars RSP+
Stem RSP+
Saddle Selle Royal Seta S1
Seatpost RSP+, carbon
Weight 8kg / 17.6lb
Size tested 55cm
www.raleigh.co.uk

Ride

If you're a powerful rider who likes nothing more than putting the hammer down on flat roads then this is a great bike for you. The bottom bracket is ultra-stiff, making the bike seriously responsive. However, point the bike uphill and those heavy wheels really hold the frame back.

Any ground you lose going uphill should soon be regained on the way back down though, where the Raleigh's handling is excellent (perhaps due to the relatively short wheelbase), allowing you to really attack technical descents. The ride might be a little rough for some, but I didn't find myself dreading long days on the Militis

Value

Raleigh has produced a great frame that's hard to fault on a bike of this price. However, the wheels and groupset don't do the frame justice, so are worthy of an upgrade if you can afford it. *HR*



Slick, understated carbon frame



SRAM drivetrain is prone to mis-shifts

BMC Teammachine SLR02 105 £1,899



A lovely frame that's at home in the mountains

When a bike comes with "Altitude Series" written on the top tube, you expect it to be half-decent uphill, but the Teammachine SLR02 is also designed to be a great all-rounder.

Frame

Sitting one from the top of BMC's series of Teammachine frames, the SLR02 sees many of the same design features as its big brother, the SLR01. This means the same geometry, creating a low front end and short 40.2cm chainstays for optimum power transfer.

Yet, with all due respect to BMC's engineers, the highlight of the frame has to be that wonderful electric blue paintjob, which looks even more stunning in the flesh than it does in these pages.

Specification

On paper, for a bike that is closing in on £2,000, you might expect a little more than Shimano 105. But once you get out on the road you realise that Shimano 105 is so close to Ultegra in terms of performance that you're unlikely to notice that much of a difference. I would, however, like to see a semi-compact 52/36t chainset,

Specification

Frameset Teammachine SLR02 ACE
Gears Shimano 105, 11 32
Chainset Shimano 105, 50/34t
Brakes Shimano 105
Wheels Shimano RS11
Tyres Continental Ultra Sport 2, 23mm
Bars BMC RDB 3
Stem BMC RST 3
Saddle Fizik Arione R7
Seatpost Teammachine SLR02 carbon
Weight 8.3kg/18.29lb
Size tested 54cm
www.evanscycles.com

which would offer adequate gearing for steep climbs with the 32t sprocket, while not causing you to spin out on long descents.

Ride

There's no denying that the SLR02 is a seriously fast bike. Acceleration could be better with a wheel upgrade, but once you are up to speed it's easy to stay there, especially on climbs. The handling is also sharp, although I did find the ride a little on the harsh side, especially at the front.

Value

While the frame is more than worthy of a bike at this price point and the Shimano 105 groupset performs well, I would have liked to see at least a smattering of Ultegra componentry. It is also a shame that the heavy wheels mute the BMC's acceleration a little, and you might need to invest in a better pair to get the most out of this bike. *HR*

8



BMC's tell-tale triple triangle



Shimano 105: great performer

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FFU5

Forme Thorpe Comp 1.0 £1,999.99



Good all-rounder but struggles to grab you

Designed and tested in the Peak District, the Thorpe is the second-tier offering in Forme's carbon bike range, and has been designed to provide a balance of comfort and performance.

Frame

Forme has shunned fashion with the rounded tube shapes of the British-designed Thorpe Comp frame, and it looks rather elegant, especially as the top tube slims down where it meets the seat tube. The external cabling also seems to be behind the times, although this time not in a good way, and will prevent you upgrading to an electronic groupset.

Specification

The Forme comes equipped with Campagnolo Athena all round aside from brakes from the discontinued Centaur line. Athena is great both to look at and to use, although the 53/39t chainset is a strange choice for what is not an

out-and-out race bike. I also found the shape of the 4ZA Cirrus bars made it hard to reach the thumb shifters when in the drops.

Ride

As an all-rounder it's hard to fault the Forme Thorpe Comp. It's the lightest on test, although the gains when climbing are negated a bit by the big gears, and handling is controlled and confidence-inspiring. Comfort is also good, even towards the end of long rides, while power transfer is reasonable, with hard sprint efforts rewarded with fairly quick acceleration, although the wheels hold it back a little. However, the Forme never really grabbed me and I wouldn't necessarily find myself rushing to ride it again.

Value

Much like the quality of its ride, the Forme's value is solid if unspectacular. If you're after a Campag-equipped bike for a couple of grand then you might

Specification

Frameset Carbon
12k 700
Gears Campagnolo
Athena, 12 25t
Chainset Campagnolo
Athena, 53/39t
Brakes Campagnolo
Centaur
Wheels 4ZA Cirrus
Tyres Schwalbe Ultrero
ZX, 23mm
Bars 4ZA Cirrus
Stem 4ZA Cirrus
Saddle 4ZA Cirrus
Seatpost 4ZA Cirrus, alloy
Weight 7.75kg
Size tested 54cm
www.todayscyclist.co.uk



Carbon frame with rounded tubing



External cabling limits upgrade options

struggle to find much above Athena, so this seems spot-on. The frame also represents decent value, even if I would have liked a little more zip when putting the power down, and I would have liked to see slightly better wheels spec'd for the price. *HR*



Verdict

Specialized Tarmac is the tops

If you've been cycling for a few years and are ready to take your riding up a notch, then you're probably going to be looking to upgrade from that entry-level model that got you into the sport. And for a couple of grand, it's clear that you can pick up some seriously good bikes.

All of these bikes have very good frames, with the BMC and Specialized being derived from bikes ridden in the professional ranks, while the Raleigh and Vitus frames actually have direct peloton experience.

With this in mind it's probably no surprise that the Forme is the least racy of our quintet, defying the expectations of its short wheelbase and relatively low head tube to create a bike that is probably more at home in a fast sportive than it is a tight and

technical criterium. That said, it's certainly no plodder, and the low weight will really help in the hills.

The rest of the frames are closely matched, all really coming into their own when ridden hard. On the flat all proved excellent, and all four are stiff enough to cope with big power when needed.

However, slightly surprising is the fact that it's the two heaviest bikes on test, the Specialized and the BMC, which seem most at home in the hills, while the Vitus can bounce you around a bit on rough roads, so might not be best suited to lighter riders. All in all, the Specialized Tarmac is the best all-round option.

"The 52/36t chainset and 11-28 cassette on the Specialized is spot-on, perfect for all but the steepest gradients"

Specification

It's rare that you get five different bikes, all at roughly the same price, and all with completely different specifications, showing just how many options are available to bike manufacturers at this middle-of-the-road price point.

The Shimano Ultegra groupset on the Specialized and Vitus, and the Campagnolo Athena groupset on the Forme are the test leaders, both offering faultless shifting and braking. In fact, the only thing to separate them is the choice of gearing.

The 52/36t chainset and 11-28 cassette on the Specialized is spot-on, perfect for all but the steepest gradients and without the risk of spinning out on fast

descents, as is the case with the 50/34t chainset on the Vitus. As for the Forme, I am flummoxed as to why the company has equipped a 53/39t and 12-25 combination. That's fine on the flat, but hit the hills and you'll soon find yourself running out of gears when the gradient goes over 10 per cent.

On paper, the SRAM Rival on the Raleigh and the Shimano 105 on the BMC should be equals, but in reality this isn't the case. While I'd struggle to tell the difference between 105 and Ultegra in terms of shift quality, Rival is a bit off the pace, certainly much more clunky than any of the other groupsets seen here.

As for the wheels, you're never going to get anything amazing on a bike of this price. The Mavic Ksyriums on the Vitus are probably the pick of the bunch, but all are worthy of an upgrade further down the line if you're to get the most from any of these bikes.



Turn chainset with mid-compact ratio



Ultegra brakes offer assured stopping

Should I spend more?

Step into any bike shop with two grand in your back pocket and the temptation is always going to be spend a little more than you were expecting, when the salesman extols the virtues of the next model up in the range — but is it worth it? To be honest, probably not.

As these bikes show, for £2,000 you can get a frame that is

close to, if not as good as, the best the market has to offer. Of course keeping within that price bracket means sacrifices will have to be made elsewhere, but second and third-tier groupsets are so good these days that you'll have no reason to complain, while real gains can be found by saving up for a better pair of wheels a few months down the line.

Vitus Vitesse Evo £1,899		Specialized Tarmac Comp £2,000		Raleigh Militis Pro £1,950		Teammachine SLR02 ACE £1,599		Forme Thorpe Comp 1.0 £1,999.99							
Frame	8	Frame	9	Frame	9	Frame	9	Frame	7						
Specification	9	Specification	9	Specification	6	Specification	8	Specification	7						
Ride	8	Ride	10	Ride	8	Ride	8	Ride	8						
Value	9	Value	8	Value	7	Value	8	Value	7						
Distributor	www.chainreactioncycles.com	Distributor	www.specialized.com	Distributor	www.raleigh.co.uk	Distributor	www.evanscycles.com	Distributor	www.todayscyclist.co.uk						
Frame	High modulus T700 HM UD carbon	Frame	Specialized FACT 9r carbon	Frame	Militis Speed Blend Direct Connect Carbon	Frame	Teammachine SLR02 ACE	Frame	Carbon 12K 700						
Fork	High modulus carbon	Fork	FACT carbon fibre	Fork	C6 Speed Blend carbon	Fork	SLR02 carbon fibre	Fork	Carbon 700 12k						
Size range	49 62cm	Size range	49 61cm	Size range	50 59cm	Size range	48 60cm	Size range	50 61cm						
Weight	7.9kg	Weight	8.26kg	Weight	8kg	Weight	8.3 kg	Weight	7.75kg						
Groupset	Shimano Ultegra (105 cassette)	Groupset	Shimano Ultegra	Groupset	SRAM Rival	Groupset	Shimano 105	Groupset	Campagnolo Athena						
Gear ratios	11 25t, 50/34 chainset	Gear ratios	11 28t, 52/36	Gear ratios	11 28t, 52/36	Gear ratios	11 32t, 50/34	Gear ratios	12 25t, 53/39						
Wheels	Mavic Ksyrium	Wheels	Fulcrum Racing S4	Wheels	Cole Rollen Lite Wide (tubeless ready)	Wheels	Shimano RS11 A	Wheels	4ZA Cirrus						
Brakes	Shimano Ultegra	Brakes	Shimano Ultegra	Brakes	SRAM Rival	Brakes	Shimano 105	Brakes	Campagnolo Centaur						
Tyres	Mavic Ksyion Elite	Tyres	Specialized Turbo Pro	Tyres	Schwalbe Durano, 25mm	Tyres	Continental Ultra Sport 2, 23mm	Tyres	Schwalbe Ultremo ZX, 23mm						
Bar	Vitus Compact	Bar	Specialized Comp	Bar	RSP+	Bar	BMC RDB 3	Bar	4ZA Cirrus						
Stem	Vitus	Stem	Specialized Comp	Stem	RSP+	Stem	BMC RST 3	Stem	4ZA Cirrus						
Seatpost	Vitus	Seatpost	Specialized Comp carbon	Seatpost	RSP+	Seatpost	Teammachine SLR02 carbon	Seatpost	4ZA Cirrus alloy						
Saddle	Prologo Scratch Pro II	Saddle	Specialized Toupe Comp Gel	Saddle	Selle Royal Seta S1	Saddle	Fizik Arione R7	Saddle	4ZA Cirrus						
SIZE TESTED: 56		SIZE TESTED: 54		SIZE TESTED: 55		SIZE TESTED: 54		SIZE TESTED: 54							
A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H
560mm	73.5	73	15.5cm	39.3cm	40.5cm	56.3cm	99cm	550mm	73.5	73	14cm	38.7cm	40.5cm	54.3cm	97.7cm
560mm	73.5	72.5	14.8cm	38.7cm	40.2cm	55cm	97.8cm	540mm	73	72	14.5cm	38.5cm	40.3cm	55.5cm	97.2cm



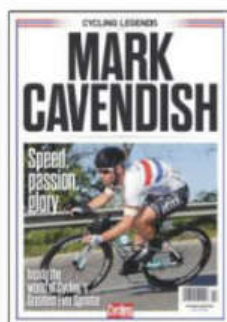
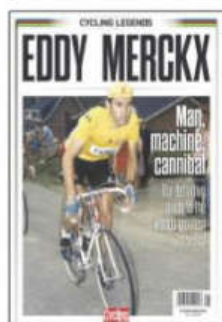
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GROUPTEST

Front lights

With the nights drawing in, a quality front light is vital. We test 10 of the best mid-range lamps

What?

A front light that mounts to your handlebars. Generally, the more money you spend, the more lumens you get, which means a brighter light. Beam widths often vary between lights, meaning some perform better than others in certain conditions. Some lamps allow you to adjust both the lumen count and the beam width. Normally, the higher the lumen setting, the quicker the burn time. Flash modes or lower settings extend battery life.

Why?

To keep you riding during the winter months, you need a good-quality front

light. This is a matter of safety and practical necessity. Having a good light means you'll be able to see down the road and also have a good view of any upcoming immediate hazards, such as potholes. An added bonus if you are riding along country lanes is that approaching cars will also be aware of your presence — because they'll see you coming.

How?

To test these 10 lights, we looked at how easy each was to charge and set up, how bright the light was, the beam pattern and finally its burn time, giving us a good feel for overall performance.

Electron F-650 £69.99

Electron's light is a two-LED design, which gives both focused and wider beams, providing peripheral coverage as well as a more detailed view of the road directly ahead. The light can be run in three modes: both beams, wide beam only and wide beam with flashing

Weight

176
grams

focused beam. The single control button is mounted on the back of the unit and is quite small, although being slightly raised it can still be operated easily in gloves.

The bar mounting bracket is a sturdy aluminium affair and is compatible with GoPro cameras too. The light also comes supplied with a Velcro helmet mounting strap, although it's difficult to get it tight enough to prevent wobble; at the best part of 200g, the light with its mount is too heavy for this to be a comfortable option. The light is quite wide too, so it takes up quite a bit of handlebar room.

The F-650 comes with amber side-windows, so that there's side visibility for a bit of extra safety. The battery life of 2.5hr is quite good for the output, although the limited range of options means that there's little flexibility to reduce lighting and extend burn time.

6

Battery life: 2.5hr

Mounts: Bar, helmet

Charge time: 5.5hr (min)

Charging: USB

Modes: Two constant, one flashing

www.madison.co.uk

650
lumens



KEY FEATURES

Lumens

The more lumens, the brighter the light

Different modes

Different lights have different lumen and beam modes, e.g. flash modes

Battery life

A front light's battery life or burn time is crucial. You don't want to be left in the dark halfway home

HOW WE SCORE

- 10 - Superb, best in its class and we couldn't fault it
- 9 - Excellent, a slight change and it would be perfect
- 8 - Brilliant, we'd happily buy it
- 7 - Solid, but there's better out there
- 6 - Pretty good, but not quite hitting the mark
- 5 - OK, not much wrong with it, but nothing special
- 4 - A few niggles let this down
- 3 - Disappointing
- 2 - Poor, approach with caution
- 1 - Terrible, do not buy this product

Cateye Volt 800

£99.99

The Volt has a robust, almost indestructible feel to it. It's very compact and solid and its sausage shape means that it takes up relatively little real estate on the bars and doesn't get in the way when riding on the tops. There are high (800 lumen), medium (400 lumen) and

Weight

135
grams

low (200 lumen) output constant modes, giving claimed runtimes of two, 3.5 and 8hr respectively. There's a flashing and an always-on with flash mode too.

Holding the top-mounted switch down turns the light on or off, and once it's on, a single click cycles the light through its five modes. A double click puts it back to its highest output. This set-up works well and ensures that you are never plunged into darkness when adjusting light intensity.

The light fits firmly into its mount without any play, so that the beam stays where it's pointed even over uneven ground and off-road. The standard Cateye bar mount has a knurled knob to tighten it, so that it can be screwed firmly to the handlebars. There's an optional helmet mount, although at 135g, the light may be a bit too heavy for this to be a comfortable option.

8

Battery life: 2hrs (max)

Mounts: Screw-on bar mount

Charge time: 5hrs (min)

Charging: USB

Modes: Three constant, two flashing

www.zyro.co.uk

800
lumens



BBB Swat BLS-105K

£69.95

The BBB Swat is very much a road/commuting-focused light. With its single constant mode, no flashing mode and 120 lumens output, it's only really suitable for riding on well-lit roads. To add to its specialisation, it also has a square, downward-facing beam pattern

Weight

87
grams

designed not to dazzle oncoming traffic. In its favour, the BBB's weight is much less than the other lights on test, and it is very portable.

Charging is via a USB plug at the rear, which is covered by a large flexible rubber cover, which is easy to get off and on.

The light fixes to the bars with a mount, which is closed with an Allen bolt. This means that it isn't easy to get on and off, although this also means that it can't be lost that easily either. The light clips into the mount with a solid click, although there's some play between them, so that it wobbles around a bit over uneven surfaces. You can buy an optional helmet mount too.

Overall, this is a light with a quality feel, but which lacks power and flexibility, making it only really useful for commutes where you need to remove the light from the bike once you arrive.

6

Battery life: 3hrs

Mounts: Allen-key bar mount

Charge time: 4hr (claimed)

Charging: USB

Modes: High beam only

www.windwave.co.uk

120
lumens



Moon LX760

£89.99

The Moon LX760 has a claimed max output of 760 lumens. The clue is in the name, but what isn't in the name is the impressive burn time of 2hr 20min. The single button on the top also doubles as a battery level indicator, changing colour between green, blue and red,

Weight

114
grams

depending on how much juice you have left.

There are seven modes offering different levels of brightness, as well as flashing, strobe and SOS Morse code settings. In

practice, the strobe might be useful if you are cycling to a rave, but I found it had little application on the road — and I find it hard to imagine other road users appreciating it either.

At just 114g, the unit packs a lot of punch for its weight and features a solid quick-release handlebar mount and removable battery. This is good sustainable design, as it means the light will outlive the battery. A USB socket enables charging, which takes a relatively quick 2.5hr when using a socket. Another great feature when charging is the 'auto cut-off' when the battery is full. This is a brilliant, well-designed light, and worthy of its nine score.

9

Battery life: 2hr 20min

Mounts: Bar, helmet

Charge time: 2hr 30min

Charging: USB

Modes: Four constant, three flashing

www.raleigh.co.uk

760
lumens



**BEST
ON TEST**

Lezyne Superdrive 1200XXL £100

With a huge output of 1,200 lumens, the Lezyne 1200XXL is the second most powerful light on test, and is also the heaviest, coming in at a substantial 237g on our scales. There are three “market-leading, ultra-high-output LEDs” with which you can switch between different

Weight

237
grams

modes by way of the single button. You can adjust the brightness and there are two flash modes.

Consistent with other Lezyne products, the quality of construction is excellent, with a tough CNC-machined body that dissipates heat and is waterproof.

If you use the full, blindness-inducing 1,200 lumens, the claimed battery life is 1hr 45min, which we found to be accurate. Switch it on to the still-impressive 600-lumen ‘enduro’ mode and you will get a 3hr 15min burn time. The single button also acts as an approximate battery level indicator, displaying either green, blue or red.

A full charge takes around 8hr. Also included is a handlebar mount and a two-year warranty. The beam, brightness and spread are excellent, but the mount could be sturdier, especially considering the high weight of the light.

8

Battery life: 1hr 45mins

Charge time: 3hrs

Mounts: Bar

Charging: USB

Modes: Four constant, two flashing

www.upgradebikes.co.uk

1,200
lumens



Magicshine Eagle 600 £95

The Magic Shine Eagle 600 is a great light that offers a high level of visibility. The claimed max output is 600 lumens, with a burn time of 1hr 30min.

The minimalist mount is secure but a little fiddly compared to others on test and you will struggle to fit it on wide

Weight

136
grams

bars. Once the mount is on the bars, there is a simple clip-into-place system to keep the light secure, with a single button to push for its release.

Another great feature is the orange sidelights which may help drivers see you when you're side-on to them. It boasts being the first light to have the option of “full beam, dipped beam or flashing”, giving you complete control on how you are seen. Its one button, mounted on top, is easily accessible to the rider.

A screen placed on the top of the light also gives you a percentage reading of the remaining battery life and the current setting. One improvement to the Eagle system, however, would be the option to have different flash modes. Although great for being spotted on the busy commute, there are other options that have better battery life and higher lumen output for the same price.

8

Battery life: 1hr 30mins

Charge time: 5hrs

Mounts: Bar

Charging: USB

Modes: Nine constant

www.magicshineuk.co.uk

600
lumens



Knog Blinder ARC 640 £89.99

Of all the lights on test, the Knog Blinder ARC 640 certainly has the sleekest design. The mount is permanently attached to the bottom of the light body, meaning there's no chance of accidentally losing either. It's also a really clever mount design, using a clip and a magnet, easy to use and attach, and also very secure.

Weight

151
grams

As for the light itself, 640 lumens is a little on the low side, meaning that I wasn't too confident heading out into unlit lanes with just the

Knog attached to my bars. However, if you're just commuting under streetlights, or want a nice simple light to attach to your bars when heading out for early morning rides, it's a really good option.

For your money, you get three constant modes, and one flashing mode, which are easily switched between using the button on the top of the light body. There are also status lights, which change colour to indicate which mode you're in and battery life.

A final feature: the USB plug is integrated into the back of the design, which — although it cuts down the number of wires on your desk — makes it a little fiddly to attach.

7

Battery life: 1hrs 50mins (max beam)

Mounts: Bar (integrated), Helmet

Charge time: 5hrs

Charging: USB (no wires)

Modes: Three constant, one flashing

www.todayscyclist.co.uk

640
lumens



Bontrager Ion 700 RT £109.99

With a max output of 700 lumens, the Bontrager Ion 700 RT sits around the midpoint of this test in terms of brightness. It's more than enough for getting through nighttime commutes, even along the occasional unlit lane, provided you know the roads well.

Weight

118
grams

The working parts are contained within a really compact body that's nice and light (pardon the pun), and easy enough to slip into your back pocket once the sun comes up and you don't need

it clogging up your cockpit.

The Sync bracket mount is also nice and secure, and I didn't have any problems with the light moving when I hit potholes. However, the rubber strap that goes around the bars is far too short, so it's a real struggle to attach to oversize, 31.8mm-diameter bars — and you can forget it if you're running aero bars.

One nice feature that none of the other lights have is the ability to control this light wirelessly using ANT+. This can be done through a Bontrager Transmitter remote (available separately for £49.99), which attaches to your bars and can control up to seven lights. Perfect if you want to look like a Christmas tree.

8

Battery life: 1hr 45min (max beam)
Mounts: Bar
Charge time: 5hr
Charging: USB
Modes: Three constant, two flashing
www.bontrager.com

700
lumens



MyTinySun Folkslight £129.95

If you're after a light that will get you through some pretty serious nighttime riding and are willing to overlook a pretty questionable name, the MyTinySun Folkslight is an excellent option.

If we're being completely honest, this is a light that's really designed for

Weight

229
grams

mountain biking, so no surprise that it's seriously bright. You get not one but two beams — more common on more expensive lights. One is designed to light up a wide area, while the second,

more focused beam is designed to illuminate the road in front of you — making sure you don't plough headlong into any potholes. This makes it perfect for heading out into dark, unlit lanes, where many of the other lights on test may not be so competent.

However, although the Folkslight is certainly the brightest light on test, it's also by far the least intuitive to use. You have two buttons, one on the rear and the other, for some reason, on the front, which are used to switch between the various modes and show battery status. Unfortunately, doing so is far too complicated, not logical at all, and I'm yet to really get the hang of it.

8

Battery life: 1hr (max beam)
Mounts: Bar
Charge time: 2.5hr
Charging: USB
Modes: Six constant
www.magicshineuk.co.uk

2,000
lumens



Nightrider Lumina 750 £90

Nightrider Lumina 750 is a decent all-round light that provides enough power to see you through some dark and unlit country lanes. Compared to others on test, it seems to use that max 750 lumen output well, giving enough of a focus to see while managing to allow for some peripheral, getting-you-seen light.

Weight

180
grams

Five different modes cover most riding scenarios, with the high setting burning out in a claimed 90min, medium at 3hr at 350 lumens and the

low 200 lumen output at 5.5hr. To be honest, the 200 lumen output will cover most commutes, though 350 did give me a little more confidence. If you really want to be seen, though, the flash mode is impressive and almost seems dazzling, ensuring you won't go unnoticed.

The unit itself is robust; in fact, I would go as far as to say it could withstand a drop — though we didn't dare to fling it down the road. The mount is a little fiddly compared to others on test; however, unlike the rest, it is aero-handlebar-friendly — and with aero bars growing in popularity, that's an increasingly useful feature. Decent value relative to performance too.

8

Battery life: 90mins (max beam)
Mounts: bar
Charge time: 2.5hrs
Charging: USB
Modes: Four constant, one flash
www.2pure.co.uk

750
lumens



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GROUPTEST

Thermal gilets

With winter looming, *Oliver Bridgewood* tests four thermal gilets designed to keep your core warm when the mercury drops

What?

Thermal gilets are designed to give your torso extra insulation during cold rides over the winter months. They offer substantially more insulation and windproofing than a lightweight gilet, and are suitable for providing an extra layer of warmth on a chilly descent or cold morning. Consequently, not all thermal gilets can be stuffed into a jersey pocket. Despite being thermal, the gilet should be breathable; the more expensive ones also offer waterproofing. A good fit is crucial too, to keep out chilling draughts.

Why?

A thermal gilet is an excellent item for adding an extra layer to your core on cold days. They also allow good freedom of movement around the arms and shoulders. Combining a gilet with snug-fitting arm-warmers is usually more aerodynamic than wearing a jacket too.

How?

These gilets have been tested on a variety of rides, and judged on performance, fit, breathability, quality, versatility, water resistance, packability, styling and any 'bonus' features.

Endura Windchill II £49.99

The excellent-quality Windchill II features three deep, open pockets and a fourth smaller zipped pocket on the rear. A fifth zipped pocket on the front has a headphone port and a little cloth for wiping sunglasses — nice touches.

The front and shoulders have good levels of waterproofing, but the sides and rear immediately let in water, so I wouldn't recommend this for use in prolonged rain. Of all the gilets on test, the Endura offered the

greatest level of insulation, thanks to the use of Thermo Roubaix fabric, and this is reflected in the weight. The Windchill II is designed to be worn throughout a ride, as it's too bulky to pack down into a jersey pocket.

Although very comfortable, this gilet is unfortunately let down by its mediocre fit, with the sizing being completely inconsistent relative to the rest of Endura's range. A size medium was far too big for me. The size small was also too big, not only across the chest, but also in length.

Colours: Black or red
Sizes: S, M, L, XL, XXL
www.endurasport.com



KEY FEATURES

Packable

Sometimes. Not always intended to be packable in a jersey pocket

HOW WE SCORE

- 10 - Superb, best in its class and we couldn't fault it
- 9 - Excellent, a slight change and it would be perfect
- 8 - Brilliant, we'd happily buy it
- 7 - Solid, but there's better out there
- 6 - Pretty good, but not quite hitting the mark
- 5 - OK, not much wrong with it, but nothing special
- 4 - A few niggles let this down
- 3 - Disappointing
- 2 - Poor, approach with caution
- 1 - Terrible, do not buy this product

Fit

Look for a good fit, to prevent wind entering around the arms and neck

Features

Thermal gilets often feature windproof panels on the front, with lighter panels on the back for breathability

Madison Road Race Softshell £59.99

Madison's thermal gilet has been developed in conjunction with its professional riders, and it punches well above its weight, that is, its price. On the rear, it features three well sized and positioned open pockets with a fourth smaller zipped pocket for valuables. It

Weight offers good insulation, though it can be stuffed in a jersey pocket too — just don't expect to be able to put anything else in with it.

The fabric on the front and sides is thicker, offering better insulation, while the rear panel is thinner to allow greater breathability. The fabric has been treated with a water-resistant finish, which works really well on the front and shoulders, although the mesh rear did let in water.

The size medium fitted me well across the chest, and the length was spot-on. However, when in a riding position, the fit around the back of the arms/shoulders left gaping holes, suggesting that the fabric didn't have sufficient stretch in this area. Overall, this is a great gilet that just needs a slight tweak to the fit.

8

Colour: Black

Sizes: S, M, L, XL, XXL

www.madison.co.uk



Dhb Professional ASV Thermal £55

The dhb Thermal gilet scores highly on fit — the collar is snug and very comfortable thanks to a fleece lining. The arm-holes are slightly elasticated, meaning they should fit well over whatever piece of clothing you wear underneath, i.e. without creating gaps through which wind can enter (unlike the Madison).

Weight 257 grams

Three rear pockets provide a good amount of storage space for a phone and energy bars, and have big enough openings to make them easy to access even when wearing bulky winter gloves. The main zipper is also easy enough to open and close thanks to the reasonably large toggle, meaning there were no problems struggling to pull down the zip as you work up a sweat on a climb.

The only possible issue with the dhb gilet is aesthetics. The main body is a striped grey, and you can choose red, yellow or blue for the side panel and accents, a look that will go well with other pieces of dhb Professional kit but perhaps not the rest of your wardrobe.

8

Colours: Red, blue, yellow

Sizes: XS, S, M, L, XL, XXL

www.wiggle.co.uk



Assos iG.falkenZahn £175

Unlike all the other thermal gilets on test, this can be worn, Assos claims, on its own over a base layer, that is, like a jersey. The iG.falkenZahn is comfortable, well-fitting and with four well-shaped pockets (one zipped), you can still layer up without losing accessibility to your gels and phone.

Weight 215 grams

Assos uses a whole host of fabrics and stitches them together in a variation of patterns to ensure each section does its job properly: six textiles, 17 patterns and 13 components, to be precise. This means fit is excellent, even with fully loaded pockets, made possible by Assos's 'rear stabiliser panel'. The gilet fabric is soft to the skin and stretchy to contour to the abdomen and torso.

Shielding from the weather is good too, with a double-layered front giving good wind-chill protection, while a high collar helps eliminate draughts. With subtle branding and good reflective panelling on the back, this is a great gilet — I can't foresee using anything else from now.

10

Sizes: S, M, L, XL, XLG, TIR

Colours: White, black, red

Contact: www.assos.com



Carbon road shoes

Chris Catchpole puts the pedals to the metal with four mid-priced carbon shoes

What?

Your feet are one of the key contact points between you and your bike, so spending a little extra on a decent pair of shoes is a good place to start when it comes to upgrading your kit. When your budget reaches as far as £150, you'll start seeing some extra worthwhile features that make a real difference to performance. A carbon-fibre sole is the first and most obvious addition, providing a stiff and comfortable base from which to power your efforts. Advanced ratchet systems that enable a secure fit and easy adjustment are found on shoes at this price too.

Why?

Uncomfortable shoes are close to a bad chamois in terms of pet hates for cyclists, so this test should help you to choose shoes that will suit you and the kind of riding you do. The £150 price point is fiercely competitive though, and with dozens of similar shoes to choose from, we've narrowed down the the variety of options to four big-brand shoes to see how they compare.

How?

We rode each of these shoes on long and short rides, commutes and club runs, and through varying temperatures to see

KEY FEATURES

Fit

A decent fit is the most important factor when choosing a shoe, so get out there and try them on

Fastening

Adjustability on the move makes long-ride comfort easily attainable

Ventilation

This is often overlooked, but is crucial to year-round performance

HOW WE SCORE

- 10 - Superb, best in its class and we couldn't fault it
- 9 - Excellent, a slight change and it would be perfect
- 8 - Brilliant, we'd happily buy it
- 7 - Solid, but there's better out there
- 6 - Pretty good, but not quite hitting the mark
- 5 - OK, nothing wrong with it, but nothing special
- 4 - A few niggles let this down
- 3 - Disappointing
- 2 - Poor, approach with caution
- 1 - Terrible, do not buy this product

Shimano R171 £150

Shimano took a big step in design when they remodelled their old R170 shoes and created these brand new R171s. On the face of it, the differences seem mostly aesthetic, but really the changes are much deeper than that. The looks of the shoe are certainly unique, with a football boot-style block colour dominating the inner area. Their distinctive appearance

Weight

612 grams

may split opinion more than the previous model, but really, it's all about the practicalities. The large area of uncluttered material is easy to clean and although vented, it makes your feet feel very well

protected. The updated ratchet closure system is easy to adjust on the move, but interestingly, it's also adjustable for fit too, with two angle options enabling a more secure fit depending on your foot shape. That, combined with a wide foot option and many, many available sizes, means few riders should struggle to find the right shoe for them. What's lacking? Well with only one main vent, hot summer days were a tad clammy, and the perforated outer wasn't quite enough to relieve heat build-up. For general UK conditions though, there isn't much to dislike.

9

Sizes: 38-50 plus wide fits

Colours: White, black

www.madison.co.uk



Specialized Expert Road Shoe £160

Specialized didn't become one of the biggest bicycle companies in the world by making bad products, and these Expert Road shoes are a case in point. The previous iteration was a popular shoe, thanks to its stylish design and good on-bike performance, so Specialized

Weight

568
grams

didn't make any bold changes when it came to updating them for 2015. It's all about marginal gains for the new design, with a few small tweaks and changes bringing them up to speed with the competition.

The closure system, an updated BOA IP1 dial, is multi-adjustable, offering almost infinite control over fit. The outer is also slightly asymmetric now, with the inside wrapping over the top of the foot a tad to increase comfort when the shoe is securely tightened. Together, the small changes make for a worthwhile improvement, but it's when you take the shoes for a ride that they really shine. The carbon/composite sole is stiff enough for serious efforts, but it doesn't promote fatigue. The design is a safe bet, but it maybe lacks some uniqueness.

9

Sizes: 39-49 plus wide fits

Colours: White/black, black/orange
www.specialized.com



Giro Trans E70 Road Cycling Shoe £159.99

If dayglo yellow isn't your thing, the Trans E70 is also available in white or black — though I must admit, these brightly coloured shoes have grown on me. They are available from 40 up to 48 in half-size increments, pretty much covering everyone's needs but broadly I found

Weight

620
grams

these to be slightly wider than others on tests, which isn't a bad thing. Giro also supplies its interchangeable arch supports, though the standard setting was comfortable for a low-arched rider. The Trans

uses the same sole as the top-end Empire SLX, which is plenty stiff enough to meet the demands of everyday cycling and sportives without compromising comfort. Fit is generally OK, despite the slightly out-of-date double Velcro strap and ratchet retention system. The fit was secure enough, but lacked the same feeling of uniform snugness that you get with Boa-style systems. The main issue I had with these cycling shoes is the bulk — at 620g they are the heaviest on test and they also look bigger than their size-matched rivals.

8

Sizes: 40-48

Colours: White, black and yellow.
www.zyro.co.uk



Northwave Torpedo Plus £164.99

It has to be said that Italian brand Northwave's contender is one of the prettier shoes in this mid-priced carbon shoe test. It isn't all style over substance either, with the Torpedo Plus barely troubling the scales at a svelte 556g for the pair.

Weight

556
grams

Fit is OK, with the SLW2 (Speed Lace Winch) retention system doing a good job ensuring complete closure, though it really isn't as good as the Boa system seen on the Specialized. It's not as

easy to use, with little scope for fine-tuning, especially on the move. Fit is also helped by Northwave's Performance Pro foot-bed and Integrated Heel System, which is also claimed to help reduce overall weight. The shape is fairly wide so it's worth trying before you buy.

Like the others on test, they are fairly easy to clean and have a decent amount of stiffness. In fact the only downside to the Northwaves is a relative lack of ventilation — something to bear in mind if you're likely to take on long rides in high temperatures.

8

Sizes: 38-48 — half sizes 39.5-45.5

Colours: Red, black and white
www.i-ride.co.uk



Slow death of the quick-release?

Disc brakes are here for road bikes, so is it goodbye to the trusty quick-release axle?

With the expansion of disc brakes in the road market, and the extra braking forces that hydraulic discs generate, could the humble quick-release be ditched in favour of stronger 'bolt-thru' axles?

These do away with open dropouts, instead featuring a chunky quick-release axle that slides through a hole on the left side before threading into another hole on the right side before being tensioned using the QR lever.

Certainly there's the potential, says Pinnacle and Hoy designer James Olsen.

"As a mid-range product manager, it's been clear to me that standards for axle types and disc mounts were going to take a little time to be established,"

Olsen says. "They have settled now, but there will be a few different mount and axle combos out there in the foreseeable future, if only due to price point — thru-axles aren't cheap. That said, Shimano is steering us toward 12mm front thru-axles for road now, with 15mm seen to be the wrong spec.

"Personally, I'd like to see cyclo-cross bikes continue to be compatible with either road or light 29er wheels. In that case, 15x100 front axles get my vote, or even the good old quick-release.

"There will be a choice of different axles for the foreseeable future, and while that's all up in the air, some manufacturers will be reluctant to change their products too much. That means quick-releases will certainly be

around for some time."

Others, though, are more certain that the future is bolt-thru. Andrew Lorenzi is B'Twin's design manager and has to produce bikes from entry-level road machines right up to top-end race bikes. He thinks things are heading away from quick-releases, but it's the top end where difficulties will arise.

"Thru-axles will become the norm," Lorenzi said. "However, I think we will need to find a solution that allows quicker wheel changes.

"There will probably be some compromise between quick-release and thru-axles. I think Focus had such a system. For most people, thru-axles will be OK, but for road racers it will be a problem. Similarly a disc brake also



Disc brakes are ideal for cyclo-cross bikes



makes it a bit slower to change wheel because you have to align the disc.”

Effectively, as the technology currently stands, the performance advantages a racing cyclist might gain from the stiffer axle and disc brake system could be all undone in the event of a puncture or wheel-based mechanical problem.

Rules and regs

For legendary bike designer Mike Burrows, though, the question is more fundamental. “With the UCI not even granting permission for disc brakes on road bikes yet, I think talking about the death of the quick-release is premature,” Burrows said.

“I think it’s likely the UCI will, if anything, drop its minimum bike weight regulations and it will be replaced by a safety standard instead. And if the minimum weight limit is dropped or removed entirely, then I think disc brakes and thru-axles will be off the agenda for race bikes — they’ll stick to lightweight caliper rim brakes.

“If you watched the Tour de France or Vuelta a España, you’d have seen the riders aren’t using their brakes much. It’s not about braking on a road bike, it’s about lightweight, speed and ease of wheel change — things that disc brakes and thru-axles don’t help with.”

What about safety, then? The quick-release’s ease of wheel change can also rear its head as a safety issue.

“I was an expert witness in a legal case once where a guy was badly hurt going at speed on a mountain bike after his wheel fell out,” Burrows explains.

“The quick-release had either not been done up properly, or it had been caught on a bush, opened and unscrewed. The fork had ‘lawyer lips’ [little tabs that retain the fork if the QR opens] — I examined it myself — and you could clearly see where the wheel had been pulling across.

“I felt that actually having a quick-release and disc brake trying to pull the wheel out is a good thing because, if you’re paying attention, it lets you

“For most people, thru-axles will be OK, but for road racers it will be a problem”

know instantly that something’s gone wrong. Every time you put the brake on, the wheel moves across to one side,” Burrows adds.

“For whatever reason, this lad

didn’t notice it, but you could see that it had been wearing to one side. So my opinion is that as long as you have lawyer lips and a good QR with an anti-spin device, then the current QR system is fine.”

In truth, whatever the arguments supporting of thru-axles on the grounds of strength or safety, it seems inconceivable that the QR will disappear entirely. And Burrows’s point about the UCI weight limit is particularly valid. If that is removed entirely, it’s very unlikely that manufacturers of pro team bikes would continue with their push to fit disc brakes — they’ll be too busy battling to make the lightest race bike in the world.

Ironically, then, the push for technological improvements elsewhere on the modern racing bike may well end up saving one of its oldest components.

Industry view

Mike Burrows



Former chief designer at Giant and the creator of the compact road frame

Cycling Active: Why would anybody want to replace a quick-release wheel axle with a thru-axle?

MB: The only advantage, to my mind, that you have with a thru-axle system is that it adds stiffness to the fork. On a suspension fork, that is a very useful feature. But for a road bike it seems to me a completely unnecessary chunk of weight. What you want is a quick-release made to a certain standard, not a lightweight, trick quick-release. If anything, there should be improved regulations concerning quick-release quality, not a shift to thru-axles.

CA: So, if quick-releases stay, does that mean disc brakes on road bikes won’t continue to flourish?

MB: It’s not saying that disc brakes won’t happen on road bikes at all, and there are a number of other cycling disciplines where disc brakes make a lot of sense on a road bike. In fact, for the average person, disc brakes do make a lot of sense, and you possibly don’t need a quick-release. But thru-axles certainly won’t add to the outright performance of a pro race bike, and at the end of the day, that’s the bottom line.

CA: What other fork design options are there?

MB: I’ve always been a massive proponent of the monoblade fork. Certainly, anyone who is seriously worried about wheels coming out wants a monoblade fork. Fitted with a disc brake they are especially safe, because ultimately it’s the caliper itself that will stop the wheel coming off.

Adjusting your brakes

James Bracey's expert guidance this month focuses on the fine art of brake fettling



Brakes make you stop. Simple. Your brakes are important things really; those thin rubber blocks can be all that stands between you making that corner and ending up in a hedge, so being able to rely on affirmative action when you pull on the levers should be a given.

We all like our brakes to work differently, some people preferring a more immediate action whilst others favour a more progressive feel with lots of lever pull.

The standard road caliper can look quite complicated at first glance and as they are spring-loaded a ham-fisted approach when adjusting could see you requiring an extra pair of hands pretty quickly. Take your time and go easy and you will soon be able to set your brakes exactly as you like them. I also like to work on clean brakes as it makes it easier to check they are working properly and stops you getting covered head to toe in black brake dust (it's amazing where it ends up and it doesn't wash out of carpets!).

Time taken
20 MINUTES



JAMES BRACEY
CA MECHANIC

Self-confessed bike geek and senior bike-fit technician at Pedal Heaven in Fleet, James rides for Pivot Boompods RT and has raced across a variety disciplines for nearly 25 years.

Tools

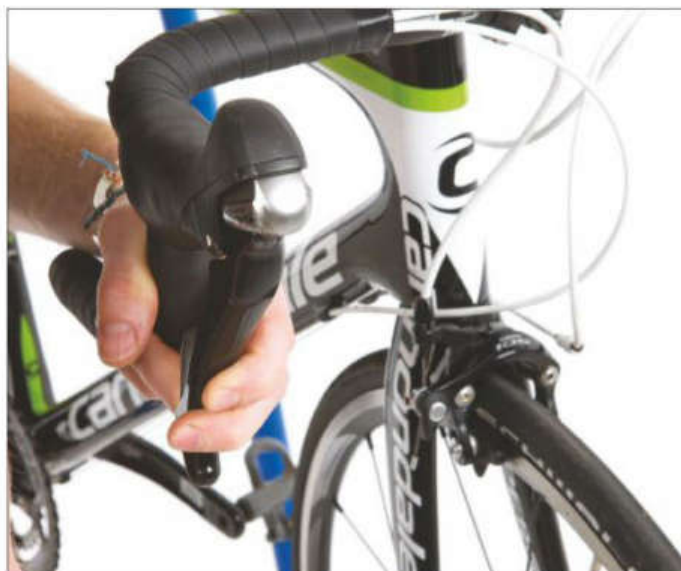
Allen keys
(normally 5mm, 4mm and possibly a 2mm or 2.5mm)

Torx keys
(commonly size 25 for some calipers)

Thin flat or Phillips screwdriver

1 IDENTIFY FAULTS

Give the brake lever a squeeze to identify any faults. Things you are looking for could be the lever operating too close to the handlebar, a feeling of roughness through the lever (dirty or worn cable), a sticky caliper (not releasing) or pad wear.



2 BASIC CABLE ADJUSTMENT

If most things seem fine but the brake lever is pulling back too far and not allowing you to brake properly then the cable tension needs to be adjusted by taking up the slack in the cable. On the top of the caliper where the cable goes in there is often an adjuster that can be wound out to tighten the brake cable; this can be used easily when out on a ride to fine-tune the brake feel. If you do wind the adjuster out make sure to screw the thin locking (if it has one) against the caliper body otherwise the adjuster will wind itself back in over time.



3 FULL CABLE ADJUSTMENT

If the barrel adjuster has been used but the cable is still too slack you will have to set up the caliper from scratch. Don't worry — it's a straightforward job.

■ Squeeze the caliper together with your hand to bring the pads into contact with the rim. This will de-tension the cable allowing adjustment without the caliper springing open.

■ With the brake caliper held closed, loosen the cable pinch bolt with a 5mm Allen key until the cable is free to move.

■ Wind the barrel adjuster fully in, then back it off a turn. Pull the cable the required amount to set the brake to how you like it to feel — probably no more than a few millimetres.

■ Tighten the cable pinch bolt securely and pull the lever to make sure you have it set correctly and that the pads aren't rubbing.

Tip

If your caliper has a quick-release lever to ease wheel removal, make sure it is not in the open position when you set the tension as you will find the brake is too tight when it is closed.



4 CHECKING AND REPLACING PADS

If your brake pads are excessively worn or damaged you will need to replace them before they cause damage to the braking surface of your wheels. Most modern brake pads come in two parts: the brake pad itself (insert) and a metal holder. If your pads are an older one-piece design you might want to upgrade now as one of the benefits of the newer design is better braking performance.

■ With the wheel removed, loosen the small bolt at the end of the brake pad holder (if it has one), being careful not to lose it!

■ Slide the old pad out towards the opening at the back end of the holder and discard. You might need to carefully use a thin screwdriver to lever the pad out.

■ Slide a new pad in — they are normally marked on the back R and L and Forward so match up what came out with what goes in.

Tip

A little dab of chain lube on the edges of the pad holder will help slide the new pad into place.



5 ALIGNING PADS

Check the alignment of the brake pads against the rim by pulling the brake lever and making sure the pad is in contact with the braking surface only and not touching the tyre or dropping below onto other parts of the rim.

■ If you need to adjust, gently loosen the 4mm Allen bolt holding the pad/holder to the caliper whilst applying the brake (this prevents the pad from dropping off the rim). Move the pad into the correct position and then tighten the Allen bolt making sure you check the pad stays in position against the twisting of the bolt. Release brake and pull again to check the alignment.



Tip

To prevent your brake squealing you might need to 'toe in' the pad — this means angling the pad so the leading edge hits the rim slightly before the rear. Loosen the pad and tilt it so the front is approximately 1mm closer to the rim than the rear.

6 ALIGNING CALIPER

Sometimes one pad will touch the rim before the other thus pushing the wheel to one side when braking. To align the caliper, use a 5mm Allen key to slightly loosen the caliper mounting bolt — behind the fork crown for the

front brake or behind the seatstay bridge for the rear.

■ With the brake held on, tighten the bolt and check the alignment. If it is still a little out use your hand to manually adjust until both pads contact the rim at the same time.



Android GPS smartphone

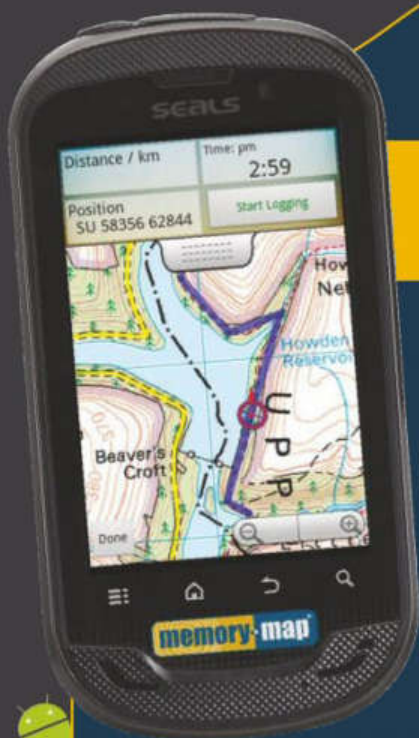
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Foods to live longer and cycle better

And you don't have to turn the planet upside-down looking for them...

So-called superfoods have become a minor obsession among the cycling fraternity in recent years. Whether it's a leafy green or a gluten-free grain, there are health benefits to be had, and if you delve deep enough into them, they could improve your cycling too.

For the past few years, the blueberry has sat at the top of the charts. This tiny fruit is packed full of essential vitamins and minerals, and has high antioxidant properties, which are ideal for post-cycling recovery, reducing the effects of oxidative stress that accrue during intense aerobic exercise.

Beetroot juice is a popular favourite too. The naturally occurring nitrates help relax blood vessels, lowering blood pressure. As a result, the improved blood-flow will strengthen aerobic performance, as a greater amount of oxygen is delivered to the working muscles.

It's no wonder they are called superfoods, and it looks like the obsession is only going to grow, thanks to a new TV show featuring celebrity chef Jamie Oliver, who has travelled to all parts of the world to find out what type of diets are the secret to living longer.

Upon his travels, the Naked Chef has identified 14 foods that every person should have in their kitchen cupboards. Some of the foods are somewhat surprising, but what's really

interesting is that the majority listed are readily available in most supermarkets.

Speaking in the programme, Oliver says: "It's not about goji berries and green drinks. It's about cooking smart with simple foods. They're all using humble ingredients to make some of the simplest and tastiest dishes I've ever tasted."

What's in it for cyclists?

But has Oliver got it right? And would these foods benefit our cycling performance? *CA* spoke to sports dietitian Laura Tilt about whether these 14 foods are the right ones for a cyclist's diet.

"There's a lot of hype about superfoods but in reality studies show that many of the foods we eat every day have benefits, which qualify them as much as the latest greens powder," she says. "The foods in Jamie's top 14 definitely offer great health benefits for cyclists; three eggs will provide you with around 20 grams of protein — ideal for post-ride muscle recovery

plus they contain good amounts of leucine, the amino acid which is the key to triggering new muscle synthesis.

"Lots of the brightly coloured foods like sweet

potato, black beans and greens are also rich in antioxidants which buffer oxidative stress — eating these can help your body's cells recover more quickly after intense exercise.

"Garlic can support immune function and the oils, walnuts and fish can help dial down inflammation, which is helpful during intensive training.

"The great thing about these foods is that they're foods you can, and probably do, eat every day."

Have a look at the list of 14 foods. No one food can cure all and provide everything you need, but in combination they're a great basis for a healthy diet that will support cycling performance.

14 FOODS YOU SHOULDN'T LIVE WITHOUT

- 1 Eggs
- 2 Goat's milk (feta cheese)
- 3 Fish
- 4 Sweet potato
- 5 Wild greens and herbs
- 6 Tofu
- 7 Walnuts
- 8 Black beans
- 9 Fresh fruit
- 10 Seaweed
- 11 Wild rice
- 12 Garlic
- 13 Prawns
- 14 Chillies





Inside the pain cave

You're only cheating yourself...

What shall we do with cheats? Cycling has torn itself to pieces over this question almost since the beginning of the sport and never more so than recently. It seems like there's some kind of immutable law that, if there's a race, there'll be a cheat. The confines of the pain cave are, sadly, no different.

There's a new word to add to the cycling lexicon — Zdoping. The rise and rise of Zwift, the online platform that's revolutionising indoor cycling, has given birth to this new description of an old problem. There are two ways to get an illegal leg-up on your digital competitors in the races that are getting more and more popular for Zwifters. If you've got a smattering of technical expertise, you can set up your trainer to give you an unfair advantage. The other way is easier — just lie about your weight.

Because Zwift and smart trainers use weight to calculate resistance, then wishing away 10kg gets you up the hills faster than those who come clean about the extent to which they trouble the scales. Now, I'd be the first to wish away the kilograms if it were possible. But, seriously, just what is the point? Firstly, you're only fooling yourself and losing the training benefit that honesty brings. And secondly, Zwift is such a social platform, with vibrant Facebook groups, that cheats get outed faster than Cav rides the last 200m in a sprint. So, just say no to Zdoping.

Elsewhere we're quite excited about the new trainer from Tacx. It's hellishly expensive, at just north of £1,000, but the Dutch company is promising a whisper-quiet ride of just 38dB.

Simon Schofield rides the turbo for fun and won't have a bad word said about it

in association with



Concussion technology comes to the fore

Cycling has its fair share of concussion injuries, with a number of high-profile cases

occurring within the professional peloton each season. This was highlighted recently at the Vuelta a España when Kris Boeckmans suffered a horrific crash and concussion, alongside numerous other injuries. This resulted in the Belgian rider being placed in a medically induced coma for 12 days.

Concussion within sport has been highlighted over recent weeks, with the start of the Rugby World Cup being seen as a platform for technology companies to showcase their knowledge that could help manage the effects of concussion in the future.

Concussion is an injury

that occurs when the brain hits the skull through a blow or sudden injury to the head.

CSz is a New Zealand-based technology company focused on the management of concussion within sport and is showcasing its latest technology at the Rugby World Cup. The software, which is immediately available to a team's medical personnel, can track the concussion history of a player over their career and contains all the latest head injury assessment protocols to administer pitchside assessments.

If current trials are successful, then these technology developments could soon be used in other sports, including cycling, in the battle to improve concussion prevention through protective headwear and protocols for treatment.

SYMPTOMS OF CONCUSSION

- Unable to think clearly or concentrate
- Headache alongside blurry vision
- Dizziness and immediate vomiting after impact
- Memory problems

Any symptoms of concussion need immediate medical attention

Recommended

PowerBar Energize wafer

Where? Before or during a ride.

What? Energy wafer with a carbohydrate boost.

Why? Staying fuelled on the bike is a necessity when you are looking to maintain optimal performance throughout your ride. PowerBar has long been known for developing reliable sports nutrition products, mainly through energy bars. However, the



Energize wafer gives you similar nutrition benefits and the much-needed energy

boost while on the bike. The lighter texture of the wafer means it can be digested easier and the two-to-one ratio of glucose-to-fructose energy source means that more energy can be used, compared to just a pure glucose carbohydrate source. Coming in berry yogurt or chocolate peanut flavours, each wafer contains 28g of the recommended 90g of carbohydrates required per hour.

£9.99 for a box of 12

66fit gym ball

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Cycling

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This month **WE RAMP UP THE PRESSURE**

Last month was all about establishing patterns and settling into a training routine that we could build on. So it's probably no surprise that November's plan is, to all intents and purposes, an extension of October's. It does take the effort up a notch very slightly with a few harder blocks, but the focus is very much on building basic aerobic fitness with solid, steady riding. And so, while the weather is still (hopefully) forgiving and late October's change in the clocks gives us a little more morning light to work with, you'll build up to the longest rides you'll do until spring



USING THE TRAINING PLAN

First choose your plan. The Challenge Plan is for riders building up to mid-distance sportives, events where you will be riding continuously for up to five hours. The Epic Plan is for those targeting 100 miles and beyond, in events that may also feature large amounts of climbing. So far so normal, but these plans are different. We don't tell you exactly when to do each ride. Instead we're going to give you the tools to fit the rides into your life. Just try to do similar rides on the same days each week, keep hard rides apart, and make sure you always take one day off riding each week.

Key sessions for this month



LONG RIDES (CHALLENGE AND EPIC)

The simplest way to increase load in the early stages of a training cycle is to spend more time riding. For most of us that means a longer long ride. Not harder, and not easier, just more general fitness-building at around lactate threshold (Zone 2).



ZONE THREE BLOCKS (CHALLENGE AND EPIC)

Working above your lactate threshold (in Zone 3a) tends to tie in with an increase in your body's reliance on muscle glycogen for fuel. Training benefits are similar to Zone 2 (muscle fibre conversion and fuel use and storage improvements), the return you get increases as you work on pushing your threshold up from below and tugging it from above.



(SOMEWHAT) HARD HILLS (CHALLENGE AND EPIC)

This ride builds on the approach to short hills introduced in October — measured surges above an underlying Zone 2 effort. But now you need to push a little harder — up to sweetspot — which increases blood acidity and lactate levels a little more, and in turn leads to further improvements in clearance.



STEADY-STATE SPIN (CHALLENGE EXTRA)

Continuous, consistent effort right at Zone 2 is central to improving general aerobic condition, but we'll combine it with some blocks of high cadence to add an extra layer of efficiency and technical skill (and possibly interest) to your ride.



BIG GEAR SURGES (EPIC EXTRA)

Pushing against the high resistance of a big gear doesn't build strength in a scientific sense, but it does put lots of torque through the muscles, which can be useful preparation for riding faster on the flat, powering over little lumps, and handling sudden and unexpected changes in pace or gradient.

GAUGING YOUR EFFORT

Improving your fitness and increasing your speed has a lot to do with doing the right training, often enough, at the right time. That means knowing how hard to work and how hard you're working is key. The rides in our plans are described in terms of time in different zones. Hold the required level as evenly as possible for the time required and you'll know you're doing the right work.

Zone	Effort	You can...	%MHR	%FTP (Power)	%FTP (Heart Rate)
1	Easy	Speak, sing and even dance!	65% or below	up to 55%	up to 68%
2	Slow	Chat freely	around 70%	56-75%	69-83%
3a	Steady	Just about hold a conversation	around 75%	76-85%	84-90%
3b	Brisk	Speak in single sentences	around 80%	85-90%	91-94%
4	Threshold	Bark short phrases!	around 85%	91-105%	95-105%
5	Hard	Only get out the odd word	around 90%	106-120%	106% or more
6	Very Hard	Grun! Gasp! Pant!	N/A	121-150%	N/A

Terminology

Maximum heart rate

Heart rate is an indicator of how hard your body is working — the higher the heart rate, the harder you're working. Once you know your maximum heart rate (MHR) you can work out your own personal training zones — you'll need a heart-rate monitor.

You can use the following formulae to predict your MHR without even turning a pedal:

MEN: $214 - (0.8 \times \text{age})$

WOMEN: $209 - (0.9 \times \text{age})$

For a more exact figure, use this simple test:

■ **Ride Easy for 15-30 minutes, finishing at the bottom of a long, steady hill.**

■ **Ride up the hill for five minutes at a nice, brisk pace, then coast back to the bottom.**

■ **Climb the hill again. Start at the same brisk pace, but this time increase your effort every 30 seconds. When you reach the point where you can push no harder, stand on the pedals and sprint until you have to stop.**

■ **Coast back to the bottom and repeat step three again before riding home.**

You'll probably hit your MHR somewhere towards the middle of the third ascent. (You will need a heart-rate monitor that records maximum heart rate to be able to perform this test properly).

Once you have established your MHR, simply use the MHR column in the table below to set your own heart rate zones.

Functional Threshold

Your functional threshold (FT) is the best average effort you can possibly manage in one hour of non-stop riding. Thankfully, you don't need to suffer for an hour to work this out. Instead, use the following test ride (devised by Hunter Allen of Training Peaks) to calculate a 'real-world' FT:

■ **Ride Easy for 20 minutes.**

■ **Do 3 x 1min at a high cadence (120rpm) in a small gear with one minute Easy after each.**

■ **Ride Easy for a further four minutes.**

■ **Ride as hard as possible for a further five minutes.**

■ **Ride Easy for 10 minutes.**

■ **Ride as hard as you can for 20 minutes.**

Aim to finish the 20 minutes having given absolutely everything you have. (You'll need to be able to record an average power or heart rate for the 20-minute all-out effort.) Afterwards, work out the average power or HR for that final 20-minute effort, and multiply that number by 0.95. This will give you your FT, which you can then use to calculate your training zones, using the percentages in columns five and six, depending on whether your number is a heart rate or a power rating.

CYCLING ACTIVE
★ ★ ★
**TRAINING PLAN
CHALLENGE**
DISTANCE
NOVEMBER

LONG RIDES

There are few surprises here. It's a non-stop Zone 2 effort just like October's. It's just longer



By now you should be taking your ride time up by 20 minutes a week. It's usually best to add it as an extra loop at the start of the ride (particularly if you normally meet up with other riders who tend to ride a set time) or somewhere in the middle. Adding the extra time at the end of your normal circuit can be a bit soul destroying as you get home and then head back out again, and may mean you have to ride on the busiest roads when you're at your most fatigued. It's also worth choosing a final 30-45 minutes that are flat but not too fast. If you're tired, there's a chance that you'll ease off more than you should on downhill sections or when there's a strong tailwind.

TIP

Start eating early so you can keep your pace up in the final hour

How many times this month

4x

Duration (hr)

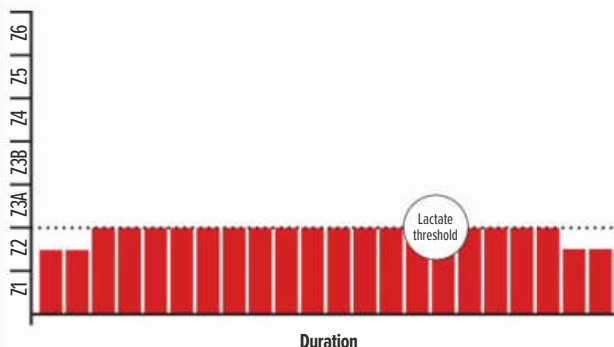
3-4

Intensity

65%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	3-4	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	2-3	Every hour
Recovery drink	1	ASAP

INTENSITY



ZONE THREE BLOCKS

The blocks of faster, focused efforts in this ride are your first real step towards faster times next year



The majority of this ride should be straightforward Zone 2 work at 90-95rpm. In fact, it's really important that this pace remains solid and consistent because it's the constant combination of Zone 2 and Zone 3a that makes

this session effective. Add three 10-minute strong, even efforts in Zone 3a into the ride in the first week, then extend those blocks first to 15 minutes, and then to 20 minutes in the subsequent weeks. Ideally keep the efforts spread out throughout the ride rather than all clustered together, but you can afford to be a little flexible depending on your route.

TIP

Avoid hilly routes unless you're certain you can keep the power up downhill

Rides like this will burn through your muscle glycogen stores pretty quickly (particularly this early in a training cycle), so try to time the ride for about an hour after a balanced meal and expect to refuel again soon after you get home — especially if you have a ride planned for the next day. You may also find that they lead to you thumping along a lot faster than you're used to, so do be careful about the route you choose — not only for safety, but also because somewhere quiet with few lights or tricky junctions will allow you to keep that nice constant output going. It's also probably safest to do this ride in daylight — either at lunchtime or in the morning as the sun is coming up — rather than after dark.

How many times this month

3x

Duration (hr)

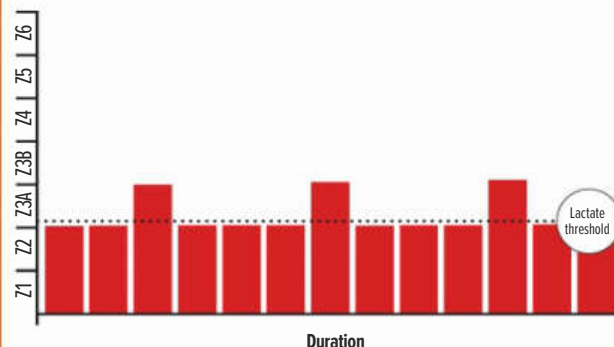
1.5-2

Intensity

70%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	2	Sip every 10min
Energy gels	1	Just in case
Energy bars	0	
Recovery drink	0	

INTENSITY



(SOMEWHAT) HARD HILLS

This ride also takes a step up this month — with the introduction of sweetspot climbing



Like last month's, this ride needs to be done on a straightforward, rolling route with as little technical descending or cornering as possible. And, like last month, you'll be riding at 90-95rpm in Zone 2 throughout apart from a

60-90 minute block in the middle where you'll push harder up all the rises. Last month you rode all the rises at Zone 3a during that block; this month you need to increase that to Zone 3b. Start with a 60-minute climbing block in the first week, and progress the ride simply by adding 10 minutes to it each week after that.

Because the rises you're pushing up should be pretty short (10 seconds to a minute), you won't really be able to pace the climbs themselves unless you have a power meter. Rely on feel instead, and also the fact that the overall effort of the block should average out right in the middle of Zone 3a. Just remember that the climbing effort will still feel easier than you're probably used to at the start of the block and the Zone 2 downhill and flats in particular will feel harder than normal towards the end.

Finally, if you need to do this ride indoors on a turbo, simply replace the hilly block with this repeatable sequence: 10secs Z3b/50secs Z2, 20secs Z3b/40secs Z2, 30secs Z3b/30secs Z2, 40secs Z3b/20secs Z2, 50secs Z3b/10secs Z2, 1min Z3b/4mins Z2.

TIP

Using the same route every week will keep your training load consistent

How many times this month

4x

Duration (hr)

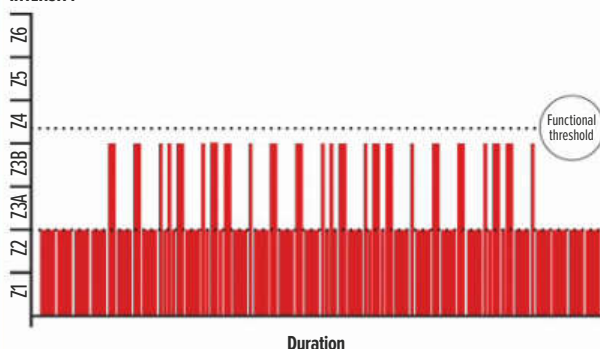
1.5-2

Intensity

80%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1-2	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	0	
Recovery drink	0	

INTENSITY



EXTRA
SESSION

STEADY-STATE SPIN

Add a little structure to any other riding you do with this simple session



Your other rides are becoming more challenging now, but they shouldn't be so tough that you have to take lots of days off or plan easy recovery rides.

Instead, you should try to fill any other rides you do with relaxed riding in Zone 2. Spend the bulk of these rides at 90-95rpm, apart from three 10-minute blocks at 110-120rpm. To start with, it'll probably be easiest to stay on the flat for these blocks, but as you adapt you should feel free to try them on a rolling route to practise carrying momentum and shifting to maintain a constant cadence. If you're struggling with the spinning, start with the lower cadence and progress each week, but there's no need to make these rides gradually longer — just fit in what you can.

TIP

If the choice is bouncing on the saddle or easing off — ease off

How many times this month

Up to 10x

Duration (hr)

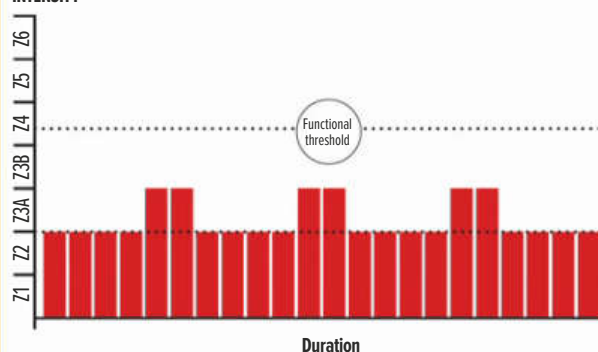
1-1.5

Intensity

65%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1-2	Sip every 10min
Energy gels	0	
Energy bars	0	
Recovery drink	0	

INTENSITY



What is?

Intensity

Intensity is a hard concept to pin down. Is a 90-minute Z2 ride with two 20-minute Z3b blocks easier or harder than an hour of easy riding that contains six all-out 30-second sprints? In this plan, intensity is a guide to how hard the hardest efforts will be — the higher the percentage the more respect the session needs and the more likely it'll be you'll need to follow it with an easy or rest day.



LONG RIDES

Your longest rides are your least ambitious in terms of pace, but don't let that fool you



As last month, this Zone 2 ride includes a block of low cadence near the start and another

towards the end. But both the blocks and the ride as a whole will get longer. Starting with two 20-minute blocks at 70-80rpm in the first week, add five minutes to each block each week. The rest of the ride should be done at around 90-95rpm. On top of that, increase your total ride time by 30 minutes each week as well (you should peak at around five hours total ride time by the end of the month).

You may find it helps to do the two low-cadence blocks as loops of the same small circuit. That way you'll have speeds, powers and split times to chase at the end of the ride, which should help you maintain a solid effort.

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	4-5	Sip every 10min
Energy gels	2 (optional)	Just in case
Energy bars	2-3	Every hour
Recovery drink	1	ASAP



How many times this month

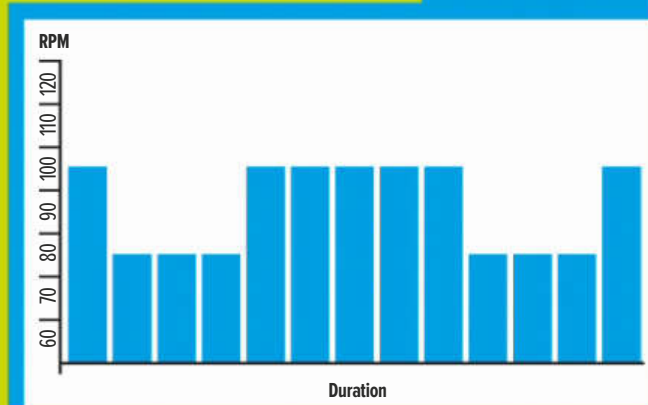
4x

Duration (hr)

4-5.5

Intensity

65%



(SOMEWHAT) HARD HILLS

The next step in our hilly ride progression hits a core training intensity — with a twist



If you followed the plan last month, you probably found yourself a little frustrated by how slowly we were making you climb during this ride. And, while the climbing effort does increase this month, it's hardly exhaustive.

So, to add a little spice, try this: climb anything that takes less than 45sec to get up in the saddle, but stand up to climb anything longer... and stay standing for the entire climb. This should add a layer of on-the-bike core stability and balance training to the ride, particularly if you can maintain 90-95rpm even when standing.

Apart from that twist, though, this ride follows last month's pattern. You should still be holding a consistent base effort of Zone 2 with as little variation or freewheeling as you can manage except for that middle block of the ride where you climb at Zone 3b. And, as before, that middle block should start out at 60 minutes and get 15 minutes longer each month. It's also best to use the same route as last month — because your familiarity with the climbs will help you keep your pacing consistent — though if you do end up doing this ride on the flat or indoors on the turbo you can get a similar workout by alternating Zone 2 and Zone 3b using the following sequence for the duration of the main block: 30secs/30secs, 60secs/60secs, 90secs/90secs, 2mins/2mins.



How many times this month

4x

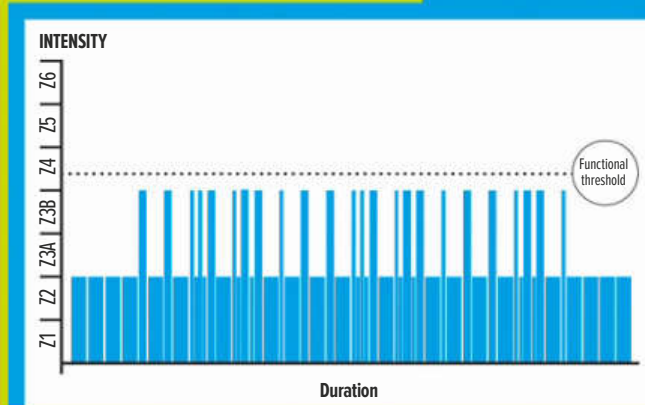
Duration (hr)

2

Intensity

80%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	2	Sip every 10min
Energy gels	1 (optional)	
Energy bars	0	
Recovery drink	0	



ZONE THREE BLOCKS

Increasing your effort towards the end of a ride should improve fitness and endurance



Set out at a nice, controlled 90-95rpm at the top of Zone 2 until you're 35 minutes from the

end of your ride. At that point, shift up and take your effort up to Zone 3a at a cadence of about 80rpm. Hold Zone 3a until the final five minutes of the ride, at which point you can ease back, and spin gently at 100rpm until you're done. As with other steady-state rides, make sure you pick a route that will allow you to keep your output as consistent and constant as possible — you want the Zone 2 section of the ride to feel like work, not like a long warm-up.

Each week you do this ride after that, increase the length of the Zone 3a block by 10 minutes, simply by starting it earlier in the ride. If you're particularly careful you can even boost the endurance returns from the ride by manipulating your carbohydrate intake around it. Avoid all carbohydrates from two hours before the ride until 5min after you've started the Zone 3a block (do drink, though, ideally a calorie-free electrolyte drink). You can even get really 'pro' and have a small serving of protein about half an hour before you head out — although (consider yourself duly warned) it can feel a bit weird eating half a tin of tuna in spring water and nothing else just before you head out!

TIP

Start your harder block with a climb to ease yourself into the effort

How many times this month

8x

Duration (hr)

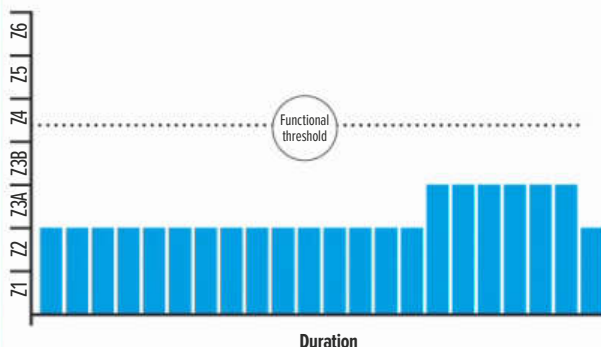
2

Intensity

70%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	2	Sip every 10min
Energy gels	2 (optional)	At 80 & 100min
Energy bars	1	
Recovery drink	01	ASAP

INTENSITY



EXTRA
SESSION

BIG GEAR SURGES

This month's extra ride is easiest to do on a turbo-trainer, but you can do it on a quiet, flat route



Start with 10 minutes of Zone 2 riding at 90-95rpm, then spend five minutes working through your gears

decreasing your cadence. By the end of the five minutes, you should be in Zone 2 at a cadence of about 60rpm. Stay there for another five minutes. For the main set, stay in that big gear and slow down until you're almost stationary. Stay seated and accelerate smoothly. Aim for 100rpm and try not to rock in the saddle or yank on the bars as you gradually increase the cadence against the heavy resistance. After the minute is up, shift into the small chainring and spin easy for two minutes. Do 6-12 efforts, adding two more each week.

TIP

Keep your feet level and focus on pushing down from the hips

How many times this month

4x

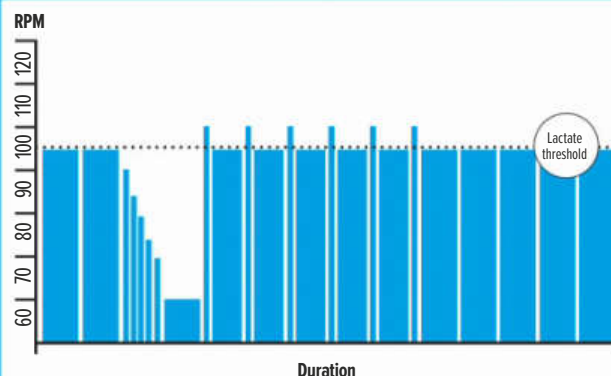
Duration (hr)

1-1.5

Intensity

70%

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1-2	Sip every 10min
Energy gels	0	
Energy bars	0	
Recovery drink	0	



What is?

Glycogen

The main fuel used to power hard cycling is carbohydrate. Some of this comes from what we eat as we ride, but most is stored in our muscles and liver as glycogen. These stores are finite (around 2,000 calories). Training while they're depleted can lead to a greater reliance on body fat for fuel, which means we burn through our glycogen stores more slowly as we ride — effectively increasing our endurance by making us more fuel-efficient.

FITNESS+
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TAKE YOUR TRAINING INSIDE

As winter approaches, *Simon Schofield* looks at the indoor options to keep your fitness levels up to speed

In the bad old days the pain cave was a dank and dreary place — somewhere you dragged your reluctant body to endure 40 minutes or an hour of churning boredom. A necessary evil in winter, turbo sessions would keep the legs turning, maybe fight off some weight gain and if you worked really hard at it, risking almost terminal levels of tedium while so doing, might just prevent some loss of fitness. But now it doesn't have to be this way.

Just as cycling outdoors has undergone a revolution in technology, frame materials, training techniques and participation, riding indoors is likewise being modernised and transformed. The noisy turbo hidden in a shed or a basement is going the way of woollen jerseys and down tube shifters. It still works, after a fashion, but the modern alternatives are simply a whole lot better. The computer game-inspired indoor riding platform, Zwift, is the poster child of the revolution.

Kevin Abt, from Wahoo, maker of the KICKR trainer, says indoor training is undergoing a step change. "If people weren't interested in

indoor training, apps like Zwift just wouldn't be appearing. Zwift, paired with KICKR, gives the opportunity to compete on a global stage and people want to spread their competitive wings, racing with a global community. The story is that riding indoors is fun for the first time ever."

But while the fun element shouldn't be underestimated in terms of its motivational value, riding indoors on Zwift, or using other training programmes can have a serious training benefit.

"If you ride more indoors, and ride in a structured way, you will be better outdoors — that's simply a fact," says Steve Beckett from Zwift.

The company is trying to change the way people view turbo-work and for some people that will mean dressing up the wolf of serious training in 'game-ified' sheep's clothing. "We are open that we are about the game-ification of fitness," says Beckett. "Some people like being in a very dark place where they are focused only on the numbers. Others like being chased by a monster or climbing up a ladder. But the results can be the same — an



Training indoors

increase in fitness.”

All the razzle-dazzle to make fitness fun comes at a cost. Just as the average price of bikes, clothing and equipment has risen exponentially in recent years, the price tags attached to some of the very best hardware and software to deck out the ultimate 21st century pain cave can be daunting. But cyclists who take their sport seriously and don't want to waste several months in winter treading water on their fitness are willing to pay it.

“We are seeing growth in all areas of trainers. A lot of cyclists have invested time and money in their fitness and they don't want to lose it in winter. And people want to quantify their fitness,” says Tim Bayley, UK brand manager for Tacx, a major force in both basic and highly sophisticated turbo-trainers.

Quantifying fitness is one of the big benefits of training indoors — it's much easier with the modern generation of turbos to train with power as some have power meters built in and many others use technology to make educated, and fairly accurate, estimates.

Bayley goes as far as naming the top three purchases for modern committed cyclists as number one — a great bike; number two — a really good set of wheels and number three — a smart trainer.

Recently retired pro rider Dean Downing now coaches cyclists who are serious about their fitness and has clients who have bought their own Wattbikes — viewed by many as the ultimate indoor trainer, this level of commitment doesn't come cheap at a cost of between £1,750 and £2,250.

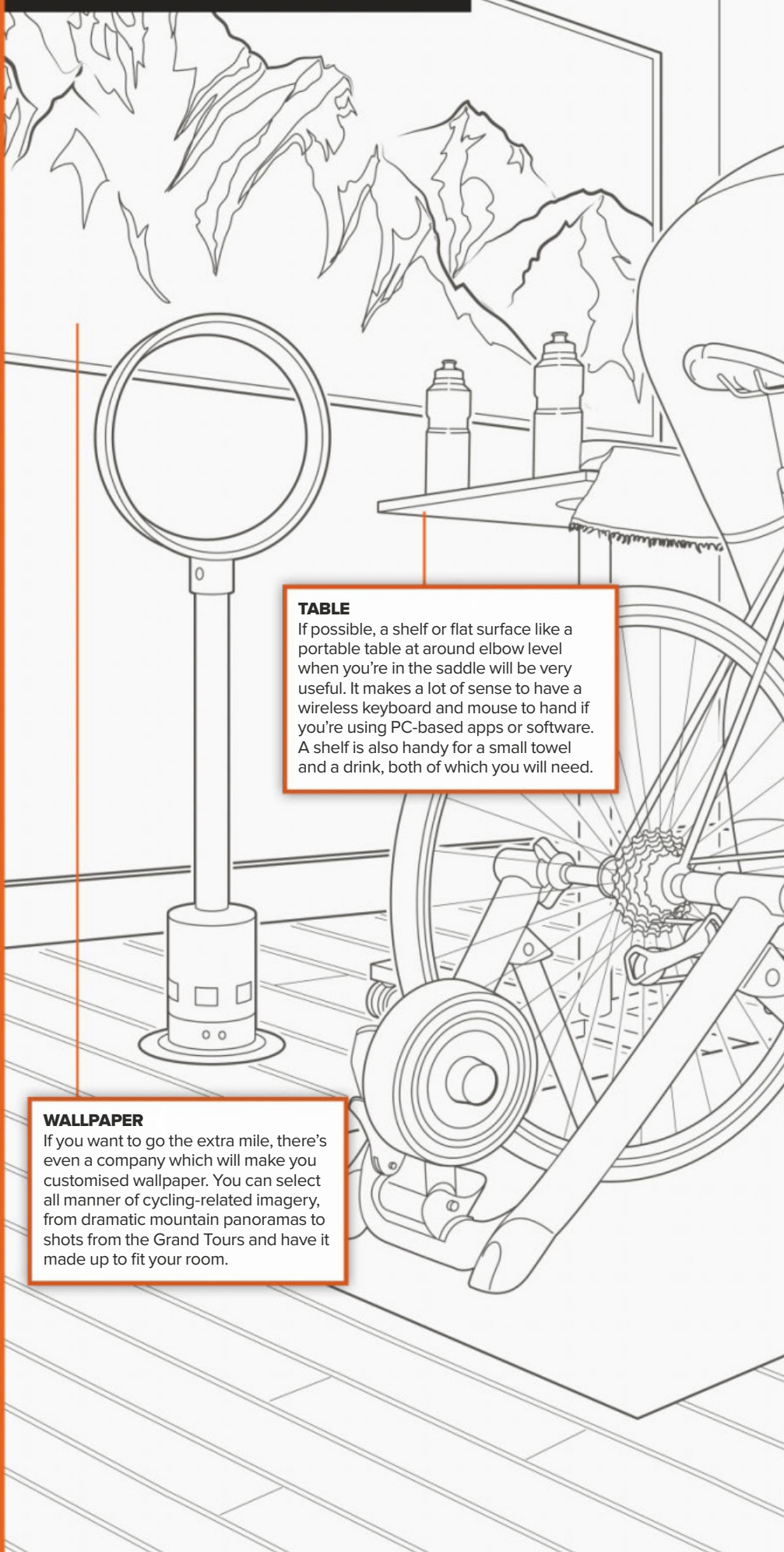
“These guys have got good jobs and disposable income. They've got busy lifestyles and work hard at their fitness. They might be riding tough sportives with similar people and they don't want to get beaten, so for them, it's worth it. In winter, if you can get on a Wattbike two or three times a week for 60 to 90 minutes, that's going to get you seriously fit as long as you're doing the right things,” says Downing.

Getting the training right

The ‘right things’ include structured training, using intervals as part of a training programme based either on heart rate or power and concentrating on your form in the saddle. It's often easier and more practical to hit and hold precise targets riding indoors, and according to Downing, it can be a more effective session than one done outside.

“There's no freewheeling, no downhill and no rest,” he says. “There's also the concentration factor. Out on the road I'd often find myself

BUILD THE ULTIMATE PAIN CAVE



TABLE

If possible, a shelf or flat surface like a portable table at around elbow level when you're in the saddle will be very useful. It makes a lot of sense to have a wireless keyboard and mouse to hand if you're using PC-based apps or software. A shelf is also handy for a small towel and a drink, both of which you will need.

WALLPAPER

If you want to go the extra mile, there's even a company which will make you customised wallpaper. You can select all manner of cycling-related imagery, from dramatic mountain panoramas to shots from the Grand Tours and have it made up to fit your room.



MOUNTED TABLET

If you're using a tablet to control the software, we are big fans of the Tacx handlebar bracket. It holds your iPad or other tablet out in front, within easy reach but away from the sweat danger area. It's robust with a good clamp system for the bars and a secure, adjustable bracket mechanism for the tablet.

TV

A big part of the modern pain cave is the exciting, motivational or instructional visuals, so it's good to have something tasty to display it on. A flat screen TV, the bigger the better, is ideal, especially if you can mount it on a swinging arm so it can be placed ideally for the turbo and then tucked away neatly after the session. Some people even use a projector for the ultimate immersive indoor experience.

MUSIC

Music is hugely motivational and should play a big part in the pain cave. The obvious is a pair of headphones but there are downsides to this option — hygiene and practicality. Many sound-bar type set-ups will now hook up to your phone and your music streamer of choice by Bluetooth or cable.

FLOOR

A hard floor, rather than carpet, is good because things do get sweaty. If the only available space is carpeted, then a good quality mat that is not going to let sweat soak through is essential.

FAN

Ideally your space would have windows that allow a through draft, assisted by a powerful fan. This will keep you cool, which is a major physiological aspect to effective training, and it will assist in dispersing moisture. With or without windows, a fan that can shift a high volume of air and provide a cooling breeze is vital.

Training indoors

getting distracted and drifting off. I'd look down and find that either my pedal stroke was all over the place or I was missing my power targets. Inside I'd find that I was thinking about it a lot more."

And then there's the weather. Even a hardened pro cyclist like Downing has an aversion to getting wet. "I was quite famous for hating the rain. Sometimes instead of going out with the lads for a three-hour chaingang in the rain, I'd do two hours on the Wattbike. The solid training was brilliant. In fact I'd say it was more useful, in training terms, than going out on the chaingang."

'Smart' or electronic trainers are the platform around which the modern pain cave is built, although they need not cost quite as much as the Wattbike. The Wahoo KICKR, in part helped by its use by Team Sky both for indoor training and for race warm-ups, is dominant at the top end of the market, although it's about to see some serious competition from Tacx (see hardware panel).

To get the best from a smart trainer it needs to be paired with software that will provide a sophisticated training programme, allow you to race online or simply provide some form of visual distraction — and sometimes all three at once. It's a broad topic, so let's get some answers to some basic questions.

Is it going to make me fitter?

It's the \$64,000 question. Your new pain cave might not cost quite that much, but is the investment in all this technology really worth it? Or is it just a series of expensive gimmicks that satisfy those without enough commitment to do it the traditional way.

"Hi-tech resources enable people to maintain a training programme through the winter at a certain intensity and in a time-efficient way. It makes training more accessible and easier to do — and that's got to be a good thing, says Stephen Gallagher of Digdeepcoaching.com.

"If you don't train indoors, you have to ask yourself what else would you have done that day? You might have gone out wrapped in a lot of clothing in the dark and the cold and completed a long slow ride. You might have risked a crash or illness. Or, you might have done nothing.

"There is some resistance to this tech-based training. People will say: 'Eddy Merckx never had a smart trainer and it didn't do him any harm'. Similarly, there was resistance to the use of heart-rate monitors in the 1980s when they first came in and there was resistance to the use of power meters but now they are widely used and accepted," says Gallagher, who provides the



"It makes training more accessible and easier, and that's got to be a good thing"

APPROACHES TO INDOOR TRAINING

While having a personal pain cave in your own home is for many the dream scenario there is another way; group cycling classes. Indoor cycling has recently undergone something of a revolution; they are serious, focused group riding sessions with a real emphasis on performance.

Wattbikes are the new gold standard for indoor cycling studios as they offer a huge range of data and can be adjusted to fit your riding position. Stages Cycling or Adjusta-bikes at Athlete Lab are also excellent indoor bikes to look out for but are less widely available. One of the attractions of group classes is that everyone's figures can be displayed at the front of the class, for those who are competitive, or made private for those who aren't. It's an interesting variation on group riding as everyone can suffer equally and regardless of physical ability still remain in the same space. The sound of other people struggling and breathing heavily discourages slacking off, helping to maintain your motivation and push harder.

Class action

Richard Collier is a cycle coach, Wattbike trainer and indoor cycling instructor. He believes that group classes have some advantages over individual turbo sessions. "You can't beat having someone nearby working hard, and this applies just as much to a group ride or an indoor class. As a coach I apply the science. I treat an indoor class the same as a coaching session that I would give a client to do out on the road, but what you have inside is complete control. People can also work with data feedback that they might not have on their own bikes."

As a coach, Collier treats his classes slightly differently to the way you might expect a class instructor to behave, "I'm not on a bike at the front, I am wandering around the room looking at form, position, pedalling technique. At home people might be hammering it out on the turbo and this is possibly not what they should be doing. If they are in front of me in a class I can see if they are working in the correct zones and offer advice. It's not quite one-to-one coaching but it's close." Having advice and tips on hand from an

expert who can also answer your training questions has clear advantages over working in isolation.

You can also train in a very personal way while having a shared experience. "It doesn't matter what your numbers are, people will be working to their own training zones and numbers, improving their own level of fitness. I can coach a class with a broad range of abilities from Elite cyclists to total beginners and they are all getting a significant fitness benefit," Collier says

Along with the music and the encouragement of a coach sharing the suffering can make the whole experience of indoor training much more positive.

The inside edge

Cycling Active's deputy editor Rebecca Charlton is a big fan of indoor classes for maintaining and improving fitness when long outdoor endurance rides are impractical.

"We all know the importance of base miles and endurance, but when you really can't get out on your bike for several hours at a time, the Wattbike does a lot for the time-poor cyclist. Intervals, high intensity and efficient training based on specific power zones has transformed my ability to suffer and all packaged in a convenient hour-long session after work, as often as I can hop on this static, all-singing, all-dancing machine."

A class can be as sociable as a group ride, in-between intervals at least offering encouragement and competition.

"Wattbike has become a regular slot in my diary and I've got friends I meet there. I never want to miss a session as I know they will be working hard and improving their fitness while I'm being lazy."

But can indoor training ever be a substitute for riding on the open road? Can you build road endurance from spending several hours a week on a static bike? "Recently riding a four-day stage event and having done the bulk of the training indoors I was pleasantly surprised at my ability to dig deep — and none of it felt as tough as sweating it out in Zone 6 between four walls in south London. But, to be honest, that bit becomes quite fun too."



coaching brains behind the Sufferfest videos.

“But the simple message from these types of training tools is: if it works for you, it works.”

So, how do you make it work for you? Gallagher has some simple tips.

- You will get the best results from the hi-tech pain cave if the sessions are integrated into a properly structured training programme.
- Ask a coach to devise a programme based on the tools you have to hand.
- If you have the appetite for research and some basic sports science knowledge you can devise your own programme.
- Failing that, off-the-shelf training programmes from companies like

TrainerRoad can produce good results.

- Remember that not all indoor sessions have to be at high intensity. Variation in pace and intensity and recovery periods are as important for indoor training as they are for road-work.
- While an all-indoor programme is possible, it's probably not desirable. At least one outside ride a week should be completed over winter if possible.
- Establishing a baseline before you begin a programme is essential. The best measure is FTP, or functional threshold power. A coach can help you establish this, but if you prefer self-testing, using the set-up that you are going to use through winter is a practical option, as the software companies make it easy to

follow the required protocols.

- Once the baseline is established, it can be used to gauge the intensity of each session. After a block of training, typically around four to six weeks in length, a re-test to find out if the programme is working is highly advisable.
- If you are using different power meters inside and outside, remember that they may give different readings. If you can fit your 'outside' power meter to your indoor set-up you can work out the offset and compensate when completing similarly-paced indoor and outdoor sessions.

Developments

Indoor training is such a vibrant and competitive area of the bike industry at the moment that there are sure to be new developments in the pipeline, some of which we may see this winter. There are rumours of a KICKR2 and Wahoo did nothing to dampen speculation when they told us: “We need to constantly push the innovation cycle forwards.”

That sounds like a “yes” to us, and it may be that Wahoo will try to address the one small area of weakness in the KICKR — its sound level. We also expect to see an entry-level trainer, priced at well below the tag on the £650 KICKR SNAP.

The app world won't be standing still either, and with Zwift on the point of moving from Beta to a full launch, when users will have to pay to ride virtually, it's fair to expect they'll be launching new features.

ANY QUESTIONS?

I don't know where to start

There are probably three main points you'll want to consider: first, do you want your pain cave to be a serious training tool that will bring you out of winter fitter and stronger? Second, how much are you willing to invest? And, third, would you like to make the pain cave less painful and more fun using the latest technology?

Let's go with “yes” to the first, “it depends” second and “obviously” to the third. Where does that get me?

That gets you to a place where you probably want a smart trainer and you might want to start saving up.

Let's park the money bit for

a moment. What, exactly, is a smart trainer?

Generally, if it plugs into the wall, it's a smart trainer. It's 'smart' because it can do two clever things: it can link up to your PC or phone/tablet giving you access to all manner of programmes and applications that make training both productive and entertaining, and it can alter the resistance on your turbo so a hill feels like a hill.

How so? Witchcraft? Hypnosis?

None of those. If you select Ergo mode the resistance changes regardless of your gear selection or cadence to the level the programme demands. So if you are supposed to be doing three

minutes at 300W, banging it down into the small ring and the 27 sprocket and slowing to 60rpm doesn't make a blind bit of difference to the effort level required — you either hit 300W or you come to an undignified and grinding halt. Cyclists don't do that.

Is there a cheaper way?

Yes. But first you want to find out which program or app you think you're going to want to use the most. Say it's Zwift or Trainer Road. Their sites list what they call “supported trainers”.

These are ordinary turbos that can be made 'smart' by adding sensors to them. They are also significantly cheaper. The Zwift and

Trainer Road people have mapped something known as the 'resistance curve' of certain turbos that allows them to predict, reasonably accurately, the power output at certain speeds and cadences. They won't change resistance automatically but they allow you to compete in online racing and to use your gears and cadence to hit power targets on intervals.

Q: You can race online?

Yes, and it's fun. An hour flashes by and before you know it, you've turned yourself inside out trying to catch Uri from Ukraine or Giovanni from Italy, exhausted and bathed in sweat. It's brilliant.

SMART TURBO SESSIONS FOR DUMB TRAINERS

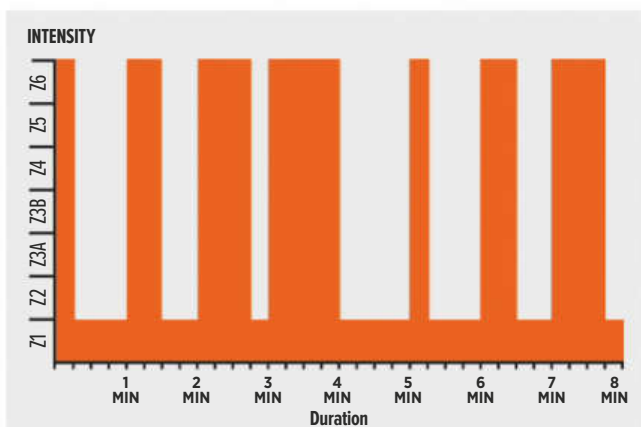
Without the bells and whistles of games and video it is even more important that when you get on the turbo you have a clear session plan to keep your focus. Here are three of the best. By which, of course, we mean toughest.

RUSSIAN STEPS

Time taken: 8min (one set)

This session is an absolute classic used by cyclists of all levels for decades. Despite being short it will hurt and isn't for the faint-hearted. Warm up for 20 minutes before getting started and give yourself at least five minutes recovery between sets if you want to do more than one.

TIME	ZONE
15 seconds	6
45 seconds	1
30 seconds	6
30 seconds	1
45 seconds	6
15 seconds	1
1 minute	6
1 minute	1
45 seconds	6
15 seconds	1
30 seconds	6
30 seconds	1
15 seconds	6
45 seconds	1



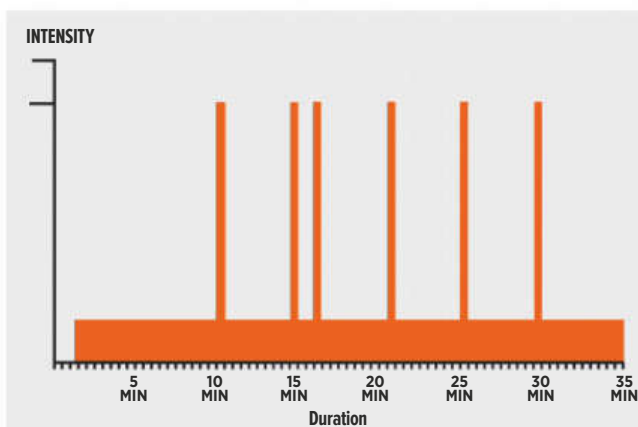
BURGOMASTER INTERVALS

Time taken: 35 minutes.

The Burgomaster session shown here only has three minutes of high-intensity work interspersed with 20 minutes of recovery time, so the whole session is done in 40 minutes but gets you a much more significant training effect than a steady 40-minute endurance ride would.

Even though the intervals are short, just 30 seconds, you should be getting close to your maximum heart rate, if not during the first intervals then certainly by the last few. The idea is to go absolutely flat-out for the 30 seconds. You won't need a monitor to know you are hitting zone 5, your breathing rate will become rapid and there will be an uncomfortable burning in your legs!

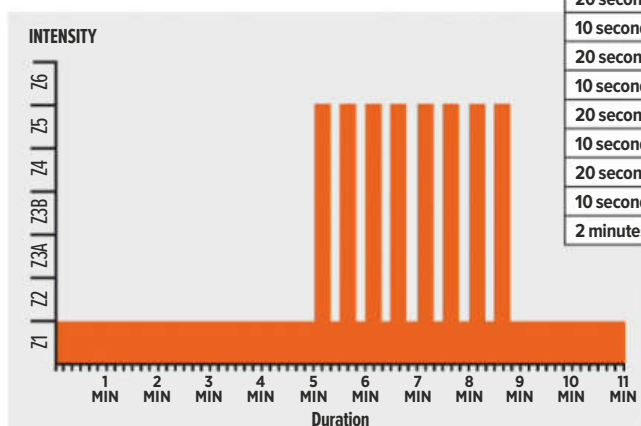
TIME	ZONE
10 min	1-2
30 seconds	5
4 minutes	1
30 seconds	5
1 minute	1
30 seconds	5
4 minutes	1
30 seconds	5
4 minutes	1
30 seconds	5
4 minutes	1
30 seconds	5
5 minutes	1



TABATA INTERVALS

Time taken: 11 minutes.

This incredibly short but hard session should be easy to fit into even the busiest of days. It's very simple, after a warm-up sprint as hard as you can for 20 seconds, recover for 10 seconds and repeat eight times so you do two 20-second all-out efforts each minute for four minutes. At first it feels easy, as the efforts are so short, but after the first two to three minutes it starts to really burn.



TIME	ZONE
5 minutes	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
20 seconds	zone 5
10 seconds	zone 1
2 minutes	zone 1



Static trainers

Oliver Bridgewood assesses four static trainers at four key price points

What?

Static trainers vary in price considerably. We have chosen a selection to represent the key price points. Trainers in the £100-300 bracket will attach to your back wheel and have several magnetic/fluid resistance settings. For £400-700, trainers come with more tech; simulated algorithmic power is a common feature. As you approach £1,000, expect actual power measurement. As price increases, trainers tend to get quieter too.

Why?

Some basic trainers are very versatile; not requiring power means you can work

outside, e.g. for warming up pre-race in a car park. Trainers that use power are incredibly useful for structured workouts. For those who struggle with motivation indoors, trainers designed with virtual reality apps such as Zwift are becoming increasingly popular and can make indoor workouts more interesting.

How?

The different trainers presented here have all been ridden extensively. I have performed a variety of workouts on them, ranging from short, 20-minute sessions to two-hour epics. This has involved a ridiculous amount of sweating and suffering.

HOW WE SCORE

- 10 - Superb, best in its class and we couldn't fault it
- 9 - Excellent, a slight change and it would be perfect
- 8 - Brilliant, we'd happily buy it
- 7 - Solid, but there's better out there
- 6 - Pretty good, but not quite hitting the mark
- 5 - OK, not much wrong with it, but nothing special
- 4 - A few niggles let this down
- 3 - Disappointing
- 2 - Poor, approach with caution
- 1 - Terrible, do not buy this product



Resistance

Resistance can be fluid, magnetic, air, or a mixture

Virtual reality

Virtual reality integration is big news and getting increasingly popular

Experience

More expensive units, in particular direct-drive ones, feel more like riding a bike outside

TACX Blue Matic T2650 £139.99

The Tacx Blue Matic T2650 resides at the lower end of the turbo-trainer price spectrum, offering a compact design and 10 resistance settings controlled via a handlebar mount, which connects to the flywheel by way of a cable.

The one-kilogram flywheel helps keep the ride smooth, but ultimately it remains turbo-like. The key difference here is that if there is a slight lull in your pedalling, the trainer doesn't freewheel on hard resistance settings, meaning it feels like pedalling through treacle to get up to speed again.

The Blue Matic isn't the quietest either, so if you have thin walls and easily aggravated neighbours, it might be worth looking elsewhere for a quieter trainer. The lower price doesn't mean it is poor quality, though — this is a very well made trainer that is easy to set up, use, and store away thanks to its compact folding design. It's perfect if you have limited space. Not requiring external power does make it ideal for warming up in car parks before races, though. Overall, good value for money.

7

Contact: www.fisheroutdoor.co.uk



Wahoo Kickr £950

The Kickr is a direct-drive turbo-trainer, meaning you just pop out your rear wheel and attach the bike on to the cassette of the unit. The ride feel is superb, with this trainer also featuring an integrated power meter.

Using the Wahoo Fitness Utility app, you can control the Kickr from your smartphone, allowing you to finely adjust the gradient and resistance. The ergo setting is particularly useful for long intervals, allowing you to set the trainer to a specific power. The power remains constant, regardless of your cadence.

Apps, such as Swift, allow you to ride in virtual reality, up and down hills, against other riders — and it is here where this trainer really excels. If the idea of virtual-reality training is your bag, then this is the ultimate tool for it.

A couple of slight disadvantages, though: firstly, the Kickr needs to be plugged in, meaning it is unsuitable for pre-race warm-ups in car parks, and secondly, you can't really sprint on it, or ride hard out of the saddle.

In essence, then, this is a good home trainer for those who need distractions and have a grand to invest.

9

Contact: www.wahoofitness.com



Bkool Pro Trainer £449

Bike installation on the Bkool — regardless of wheel size — is easy thanks to a simple frame design that lowers the wheel onto the roller. Unlike the Wahoo, Bkool's Pro Trainer can be used without connecting to the mains, making it ideal for warming up at races. It folds flat, too, so it's easy to stow away in the car boot or garage.

The Pro Trainer's real strength, however, is simulation. Once plugged in, you're able to access the software that connects via a neat ANT+ dongle that slots into your laptop's USB port. You can upload your own routes, and the trainer will alter its resistance to match the climbs. Also, you can take part in a virtual race with other Bkool owners via the internet.

The unit itself is very secure, with minimal movement even during flat-out efforts, and the roller grips the tyre well with next to no slippage even from a hard standing start.

If you're put off by the Pro Trainer's complexity (and weighty price tag) then the simpler, more cost-effective Bkool classic trainer (£241) — which also offers simulation — could be a better option.

8

Contact: www.bkool.com



Wattbike Pro £1,650

The Wattbike is a very solid indoor bike trainer and power meter. It is fully adjustable, allowing you to accurately recreate your road or TT bike position.

Resistance is courtesy of an airbrake and a magnet. Ride feel is really good and is about as close to a real bike in sensation as you can get indoors. That said, if you want to simulate hills, you will have to do it by adjusting the magnetic resistance manually; unlike the Kickr, the Wattbike isn't designed for virtual reality.

The LCD screen is useful and supplies information regarding pedalling dynamics, which can be used to help improve your pedal stroke and efficiency. Plug the bike into a computer and you can have even more data to ponder. ANT+ connectivity means you can easily connect a heart rate strap too.

A key advantage of the Wattbike over the other static training options is that you can sprint on it. Getting out the saddle and annihilating yourself for 15 seconds is not really possible on a normal turbo.

Of course, the fact this costs the best part of two grand means it probably won't be bought on a whim.

8

Contact: www.wattbike.com/uk



Magnesium

are you getting enough?

This often-overlooked electrolyte is essential for cycling performance

There's always a new nutrition trend on the horizon promising to improve your cycling performance, but the old basics are equally, if not more, important. Studies have shown that the majority of people in Europe do not consume the recommended daily allowance (RDA) of magnesium, and are therefore likely to be deficient. And it's a vital mineral.

Factors that increase the need for magnesium include regular exercise, a high-carbohydrate diet, alcohol consumption, a stressful lifestyle and lack of sleep. Most of your body's magnesium is stored in the bone, with only a small amount in blood. The body regulates blood magnesium levels by getting rid of excess in urine or, if levels are too low, leaching from bone. This makes it hard to find out if you're deficient; a blood test isn't able to detect a moderate shortfall.

Research has shown that athletes who compete in sports where weight is relevant are more likely to be magnesium-deficient than are the general population — possibly due to restricting their food intake. In one study, athletes were found to be consuming only 30-55 per cent of the RDA for magnesium, despite exercising regularly (and therefore potentially needing more than the RDA).

Symptoms of magnesium deficiency vary depending on individual circumstances and severity. Early signs include nausea, loss of appetite, fatigue, irritability and muscle weakness. Some people also experience unclear or 'foggy' thinking, insomnia, decreased ability to

deal with stress and high blood pressure.

Worsening of the deficiency can lead to tingling, numbness, muscle cramps and ticks, abnormal heart rhythms, and even personality changes. If the magnesium deficiency is severe, it disrupts interactions with other

electrolytes, which can lead to low levels of potassium or calcium in the blood. Low levels of magnesium in the blood may be also associated with sudden cardiac death, although more research is needed to confirm this link.

Adequate levels of magnesium allow



optimal exercise performance partly because magnesium allows conversion of food to energy used by muscles. The mineral also has a role in muscle contraction and relaxation. Low levels of dietary magnesium lead to an increased requirement for oxygen at sub-maximal exercise, along with a reduced overall exercise capacity.

Magnesium supplementation can lower heart rate, breathing rate, oxygen requirements and lower the amount of carbon dioxide produced while exercising — all of which may lead to significant improvements in endurance performance. Studies also show that magnesium supplementation significantly improves muscle strength. In one study, an increase in power was seen with a supplement of 250mg per day and even greater improvements with a supplement of 500mg per day.

A clinical trial with elderly women subjects has even shown that magnesium supplementation may prevent age-related decrease in exercise performance. There is good news for men too: a study at the University of Parma found that magnesium improves testosterone levels in men, which may help mediate age-related decline in this anabolic (muscle-building) hormone.

Fighting fatigue

Low body levels of magnesium may lead to low levels in your blood while exercising as the body struggles to leach magnesium from bone quickly enough. Evidence suggests this can lead to increased feelings of fatigue relative to the amount of exercise you've done and reduced endurance, possibly because exercise feels harder.

Research published in the journal *PLOS ONE* by Chen and colleagues found that magnesium supplementation can increase exercise performance in animals by increasing blood glucose availability during exercise. In a test on animals exercised on a treadmill for 60 minutes, those given magnesium had twice the amount of glucose available in the blood, muscle and brain.

Magnesium is available in many foods, most densely in seeds such as pumpkin, sesame and sunflower but also in green leafy vegetables such as Swiss chard. Processed foods tend to contain very little or no magnesium.

Optimising recovery from training is a tricky business, even for professional cyclists. Magnesium improves recovery by reducing inflammation, mopping up free-radicals, allowing faster removal of waste metabolites from muscle and allowing the immune system to do

The effects



Magnesium is used in over 300 enzymatic reactions in the body — including those which allow your body to access energy from food.

The dangers



Magnesium can be absorbed through the skin, meaning you can increase levels with an Epsom salt bath or foot soak. Given that some people suffer gastrointestinal issues with oral supplements, this is a handy method to top up your levels.

The foods



Pumpkin seeds, Swiss chard, sesame seeds, quinoa, sunflower seeds, almonds, spinach, cashews, peanuts (roasted), soymilk, avocado, potato (baked with skin), brown rice, cocoa (dark chocolate), green leafy vegetables, seafood (especially shrimps), whole grains.

muscle repair work. There are other less obvious effects, though, such as improving sleep quality — sleep being crucial for recovery.

If you're going to take an oral magnesium supplement, magnesium citrate or magnesium bound to bisglycinate are best, since magnesium carbonate and sulphate are less easily absorbed. Some people find that a magnesium supplement causes diarrhoea. If this is an issue for you, try exploiting the body's ability to absorb magnesium through the skin by taking a bath in Epsom salts. Research has shown that bathing for 20 minutes in Epsom salts improves cellular and blood levels of magnesium.

Research has also shown that taking

magnesium with medium-chain triglycerides (found in virgin coconut oil) or fructo-oligosaccharides (found in onion, garlic, bananas and other plant sources) may improve magnesium absorption.

Sleep on it

Because low blood levels of magnesium can cause insomnia, taking a supplement before bed may help you sleep. Another good time to take magnesium, or have a magnesium bath, is after a hard training session or long ride to replace magnesium lost in sweat while you were riding. This should help eliminate the 'tired but wired' feeling that can come after extreme exertion.

You're unlikely to consume too much magnesium in the form of magnesium-rich foods. The upper tolerable limit, above which toxicity occurs, is high because the kidney is capable of excreting excess. Consuming too much magnesium in supplement form would likely result in diarrhoea.

In conclusion, if you partake in frequent hard exercise *and* you suspect your diet may not contain the necessary 260mg (for 240mg for women) of magnesium per day *and* you are suffering from symptoms of magnesium deficiency — such as nausea, weakness or irregular heartbeat — it's worth consulting your GP to discuss whether you may benefit from magnesium supplementation.

WHAT IS MAGNESIUM?

Magnesium is a mineral electrolyte involved in numerous bodily functions. It has a structural role in DNA, muscle and bone. Magnesium enables cells to signal to one another, nerve cells to fire, maintains strong cellular walls and is involved in the process that relaxes muscle — which is why cramps are a symptom of deficiency.

It also has a role in reducing inflammation and allowing antioxidant enzymes to mop up free radicals produced while exercising. Without magnesium, oxygen isn't transported efficiently in the blood, reducing exercise performance and recovery. Low levels may also increase inflammation, thereby slowing down recovery and increasing allergic responses such as asthma.

MAGNESIUM PACKED RADISH & QUINOA TABOULEH WITH PISTACHIOS & CHICKEN

Quinoa has similar wholegrain properties to rice, but unlike rice it has a much higher protein content and a lower glycaemic index. This means you feel fuller for longer as energy is released more slowly. Serving it with chicken and other tangy ingredients such as lime juice and radish really adds flavour to this recipe

YOU WILL NEED

- 200g quinoa
- 600ml water
- 12 radishes, quartered
- 12 baby vine tomatoes, quartered
- 2 handfuls each fresh chopped parsley, mint and coriander
- Juice of 2 limes
- 1 handful shelled, unsalted pistachios, toasted in a dry frying pan
- Salt and pepper
- 2 chicken breast fillets, skin removed
- 2 tbsp extra virgin olive oil
- Salt and pepper
- 2 tbsp chopped parsley
- Seeds from 1 pomegranate (optional)

METHOD

1. Place the quinoa in a saucepan, bring to the boil and simmer with the lid on for 15-20 minutes until all the water has disappeared. Remove from the heat to cool. Once cool, add radishes, tomatoes, herbs, lime juice, pistachios and season.
2 Heat a griddle pan and slice each chicken breast in two, lengthwise. Place each between two pieces of cling film and use a rolling pin to hammer out till 0.5cm thick. Rub with olive oil

and season with salt and pepper, before arranging the chicken slices in a single layer on the pan. When stripes appear on the underside of the chicken (two to four minutes), turn over to colour the other side.
3 Remove chicken from the pan, sprinkle with parsley and slice into thin strips. Pile the quinoa onto a large serving plate and place the chicken strips over the top alongside a sprinkle of pomegranate seeds.

Serves
4

Cooking time
30MIN
Preparation time
15MIN

* WHY IT WORKS

372
kcalories

58.6g
carbohydrates

32.9g
protein

12.5g
Fat

YOU WILL NEED

- 2 tbsp olive oil
- 2 tbsp butter
- 1 onion chopped
- 3 cloves garlic sliced
- 1 tbsp cumin seeds
- 1 tbsp fennel seeds
- 1 tsp black onion seeds
- 400g basmati rice
- 400g butternut squash, diced
- 800ml hot chicken stock
- Salt and pepper
- 100ml Greek yogurt
- 100g radishes sliced
- 100g roasted almonds, crushed
- Small bunch mint roughly chopped
- Small bunch coriander roughly chopped
- 1 chilli chopped

METHOD

1 Heat the oil and butter in a large saucepan before adding the onion, garlic, cumin, fennel and black onion seeds. Cook for three minutes, stirring every now and then until the onions are translucent.

2 Add the rice and cook for a further two minutes and stir until the rice has also turned translucent. Add the butternut squash and stock; once at boiling point turn down the heat to a gentle simmer.

3 Season, place the lid on the pan and leave to cook without stirring for 10 minutes or until all the stock has been absorbed. Then, turn off the heat and leave to stand for five minutes to finish cooking.

4 Remove the lid, gently stir and top with a spoonful or two of Greek yogurt. Scatter the sliced radishes and remaining ingredients over the top.

MAGNESIUM PACKED BUTTERNUT PILAF WITH ALMONDS & GREEK YOGURT

The fragrant smell of the onions and spices cooking at the beginning of the recipe will really get you in the mood for this delicious pilaf. This recipe is quick and easy to make and is packed full of vitamins and goodness.

Serves

4

Cooking time

20MIN

Preparation time

10MIN

* WHY IT WORKS

742
kcalories

92.7g
carbohydrates

24.1g
protein

30.1g
Fat

How whey protein works



Daily
needs

1.4 to 1.8g —

of protein per kg of
body weight per day



When
to take

30mins

after exercise



Recovery
dosage

20-30g

immediately after exercise



A post-ride protein boost underpins your performance but also fights illness and injury. *Robert Hicks* looks at the options

Recovery is a fundamental component of cycling performance. It's probably the most important factor within the science of cycling and without it you'll never achieve the goals that you set. Consider recovery as the key that unlocks the door to progression. Get it right, and you'll become a stronger, fitter and faster bike rider. Get it wrong, and your performance will plateau, and the risk of illness and injury will increase.

Did you know that any bike ride over an hour that consists of fairly hard efforts is actually detrimental to the body? During such prolonged activity, numerous changes are happening throughout the body. Heart, breathing and perspiration rates are easy to spot. But what you may not know is that such extreme exercise will also empty the body of its fuel and damage muscle fibres. This is why the body needs rest, and it is during these periods where your body repairs, adapts and strengthens itself. But there's more to it than that. It needs the building blocks to make those repairs. And this is why whey protein is so important.

Range of options

While carbohydrates will replenish glycogen stores, it is protein that the body needs in order to repair damaged muscle tissues and promote protein synthesis (the building of new proteins). The scientific community agrees that the body needs at least 20g of dietary protein to start the recovery process. However, in order to significantly aid recovery, and optimise protein stores, research states you should consume between 1.4 to 1.8g of protein per kilogram of body weight per day.

Post exercise, 20g to 30g of protein is more than adequate and this can be obtained through a number of sources. Red meat, poultry and fish all contain plenty of protein, as do eggs, pulses and nuts. But while real foods undoubtedly taste great and provide a welcome treat after a physically draining race or training session, they aren't always the most practical to prepare and eat, which is why recovery shakes and powders are so popular, providing enough protein and carbohydrate in a bottle. But not all nutrition products contain the same 'type' of protein, and some are better than others and will have different effects on the body.

Next time you pick up a recovery product, read the nutrition list. It will either contain casein, whey or soy. While all of these are classed as 'complete proteins', they are digested at different rates.

According to research and studies, whey protein is considered the most effective at enhancing recovery. Whey is a by-product of cheese production, and is a 'fast-acting' protein that is rapidly digested. It also contains high levels of branched-chain amino acids (BCAAs), which have been shown to stimulate muscle synthesis. Thanks to its rapid absorption, it is accepted that whey is superior to casein, which takes up to seven hours to digest. Soy, an isolate from soybean, sits somewhere in the middle, acting as an 'intermediate' protein.

Is the speed of digestion and absorption that important? Well, yes, it is. While the golden hour, the 60-minute window immediately after exercise where the body is most receptive to the intake of nutrients, has slowly started to become discredited, there is a short amount of time after exercise where the body acts like a sponge, and is able to soak up significantly more carbohydrates, proteins, electrolytes, minerals and vitamins than at any other time. It is believed this time frame only lasts 20 minutes.

Slow recovery research

Exercise temporarily weakens the immune system, and during the 72 hours after exercise, the body is more susceptible to picking up infections. Consuming protein immediately after exercise has been shown to keep the immune system strong. In a 2013 study, which was published in *Brain, Behaviour and Immunity*, scientists looked at whether a high-protein diet could boost the markers of immunity in a group of trained cyclists undergoing heavy training, and whether it could reduce the incidences of upper respiratory tract infection (URTI). The cyclists underwent two separate weeks of high-intensity training; during one period, they consumed a high-protein diet consisting of 3g of protein per kg of body weight. The results showed that when cyclists consumed a lower-protein diet, during the training period, their immune function significantly dropped. However, when the cyclists were on a higher-protein diet, immune function did not suffer and remained just as effective as during normal intensity. What was significant

OLDER CYCLIST? MORE PROTEIN



A new body of research has shown that older adults need more dietary protein to support good health, promote recovery from illness and maintain functionality. This is due to declining anabolic responses to ingested protein. Due to an inability to absorb protein nutrients, the body will require an even greater load post exercise. According to a study published in the *Journal of the American Medical Directors Association* in 2013, it is recommended that those over 65 should consume an average of 1g to 1.2g per kg of body weight per day. For those exercising — both endurance and resistance type — a higher protein intake of more than 1.2g per kg of body weight is required.

was when the cyclists consumed a higher-protein diet, they reported fewer URTI symptoms compared to the lower-protein diet.

Whey protein itself has also been shown to boost the body's ability to respond to infection. According to the research papers, whey protein enhances glutathione (GSH) in various tissues that in turn maintains the muscle glutamine reservoir. GSH is the keystone of the body's cellular antioxidant defence system and regulates a number of aspects of immune function as well as preventing ageing, cancers and heart disease.

The verdict

It's not just about reducing the risk of illness. If you are in the middle of a heavy training period, which consists of consecutive days of training, the need to recover is heightened even more. Cycling on damaged muscle tissue can result in injuries, such as rips, tears and pulls.

During a significant bout of training, a weekend of racing or a multi-day event, it's imperative that the body is fed with fast-digesting proteins, such as whey, that will give your body the most amount of time to rest and recover for your next bout of training.

Robert Hicks is the author of *The Pain-Free Cyclist*, an in-depth cycling fitness book aimed at the elite end of amateur cycling. Foreword by Sir Bradley Wiggins.

SiS Whey Protein £22.99

Each serving provides 22-23g of protein and contains a blend of high-quality whey protein isolate and concentrate,

which will help support lean muscle growth and maintenance. Each serving contains at least 5g of BCAAs — the building blocks of protein that must be obtained through one's diet, as the body is unable to produce them. Leucine is one of those amino acids, which will not only build new muscle protein, but also increase the rate of

muscle protein synthesis. SiS has included leucine in all of its whey recovery products, with the content higher in some flavours than others: either 2.5g per 30g serving for strawberry, banana and vanilla flavour, or 2.4g for chocolate flavour. As with all SiS products, they taste great and are produced at its Informed Sport accredited factory, so you can be sure that the product is safe and reliable.

This drink is a good choice if: you want a great tasting recovery drink.

www.scienceinsport.com

9



*per 30g serving

PowerBar Recovery £14.99

PowerBar's Recovery Regeneration drink is designed for immediate use after exercise. Unlike a few in this test,

PowerBar uses a combination of whey, casein and soy. Some research says that a blend of proteins may be better, providing a timed release of amino acids to the muscles, extending the window for muscle building. PowerBar has also included 3mg of zinc per serving to support immune system function and magnesium to help reduce the

feelings of post-exercise fatigue. Each serving will provide 11.1g of protein and 38.8g of carbohydrates when mixed with 200ml of water, slightly lower protein than some of the other products here. This is a recovery drink designed to not only rebuild muscle tissue and promote protein synthesis but also replenish glycogen stores. It's a great tasting product that mixes easily with water.

This drink is a good choice if: you want a focus on energy stores as well as protein for muscle recovery.

www.powerbar.eu

7



CNP ProWhey protein £42.99

CNP knows a thing or two when it comes down to protein synthesis, muscle repair and recovery. Not only is it the nutrition

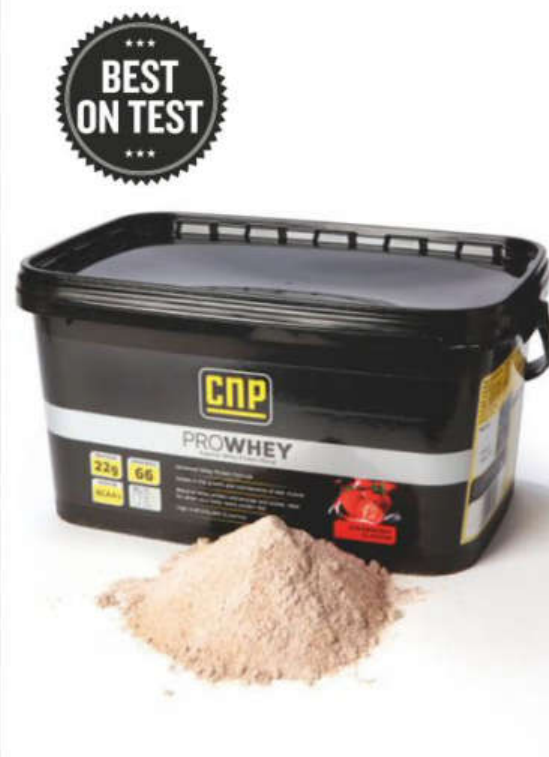
supplier for Team Sky, it also has a background in professional boxing and weightlifting. Founder Kerry Kayes was a former British bodybuilding champion. Each 2kg tub provides 66 servings that will deliver 22g of an advanced whey protein formula, BCAAs and glutamine. "Whey protein is digested quickly by the body,

making it ideal for when your body needs protein fast," says the maker. There isn't much carbohydrate in this product — 2.4g to be exact — so it won't help refuel energy stores. This is designed for your muscle tissue, so you will need to replenish your glycogen stores through other sources. The five flavours all taste very good and mix almost instantly with water.

This drink is a good choice if: you want a recovery drink that focuses purely on protein synthesis.

www.cnpprofessional.co.uk

9



High5 Protein recovery £41.99/£42.99

High5 has developed its very own "ultimate protein/ carbohydrate shake for after sport". A 60g serving provides 41g

1.6kg

size of tub

9mg

of protein

20.5g

carbohydrate

of carbohydrates and 18g of protein. Remember, research states that the body needs around 20g of protein to initiate the recovery process. Consuming more protein so quickly after exercise won't speed up protein synthesis. High5 uses whey protein isolate only, which enables the body to absorb it quickly. There are a number of flavours to

choose from that can be mixed with either water or milk. Milk is also a good source of protein and will also provide calcium to help bone health. High5 uses no artificial colours, preservatives or sweeteners. It is suitable for vegetarians. If a 1.6kg tub is too much, High5 has also developed individual 60g sachets.

These are useful if you are riding away from home and cannot prepare a recovery drink in advance.

This drink is a good choice if: you want a recovery drink that will also re-energise you.

www.highfive.co.uk

7



Kinetica sports whey protein £39.99

According to its website: "Kinetica Whey Protein is 100 per cent natural, sourced from Irish grass-fed hormone free cows

1kg

size of tub

22.2mg

of caffeine

1.4g

carbohydrate

that graze in the meadows on the west coast of Ireland." It says that these cows produce higher quality milk that is rich in essential amino acids. Kinetica has gone to a lot of effort to ensure its product is of the highest quality, using only natural flavours, whey concentrate, whey isolate and hydrolysed whey. No other protein sources,

such as pea or soya, are used. Each product undergoes 22 quality checks and is batch tested within World Anti-Doping Agency standards. Kinetica says that by opting for its product you get:

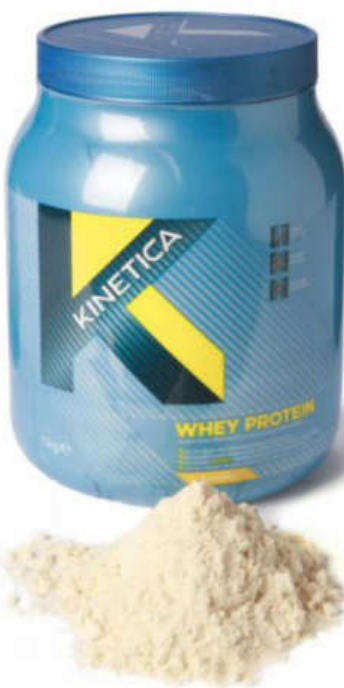
- Complete amino acid profile
- Hormone free
- Non genetically modified
- Superior taste and texture.

It tastes good and ticks all the physiological boxes.

This drink is a good choice if: you want good quality protein from trusted sources.

www.kineticasports.com

8



NATURAL ALTERNATIVE

Shake it up with a home-made smoothie



There's no denying that recovery products are very

convenient. You can achieve a similar blend of proteins and initiate the recovery process by eating a variety of wholefoods after a race or a training session on the bike. A smoothie, for example, containing one pint of milk, one large banana, a tablespoon of honey and 100g Greek yoghurt will provide 30g of protein and 70g of carbohydrates. If you're looking for less punch, then two small eggs, 300ml of milk, 30g of cheese or 50g of meat/chicken each provide a steady 10g of protein. Real foods are tastier, but they take time to prepare. And remember, the sooner you eat after your ride, the better.

1 pint
banana
smoothie

30g
protein

70mg
carbohydrate

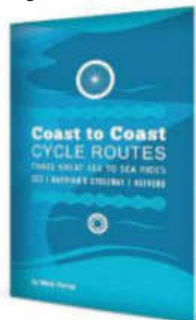


Cycling Books & DVD's

Treat yourself and get the latest DVD's and books from the Cycling Weekly Shop.

Coast to Coast Cycle Routes

by Mark Porter £11.99



Coast to Coast Cycle Routes is THE practical guide to crossing Britain. From West to East and East to West three different ways, following Britain's three most popular coast to coasts: the C2C, Hadrian's Cycleway and the Reivers. *Paperback*

Le Tour de France 2015

The Official Review £20.00



From the Grand Depart to the cobbles of Northern France and the majestic Alps and Pyrenees, 2015 provided non-stop excitement and spectacle. This official review captures in detail the gripping battles, and drama, through stunning photography and detailed reports. *Hardback*

Feed Zone Portables

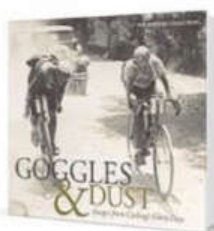
by Biju Thomas & Allen Lim £17.95



A Cookbook of On-The-Go Food for Athletes
New cookbook Feed ZonePortables, Chef Biju and Dr. Lim offer 75 all-new portable food recipes for cyclists, runners, triathletes, mountain bikers, climbers, hikers, and backpackers. *Hardback*

Goggles & Dust

The Horton Collection £11.99



The Horton Collection, Images from Cycling's Glory Days & Dust collects over 100 stunning photographs heyday. Spanning the 1920s and '30s, the grit and determination of the bicycle racing pioneers who established the records of Europe's most hallowed races. *Hardback*

This Island Race

by Rouleur £45.00



Rouleur set out to explore - to celebrate cycle racing in this country and to toast the people who make it happen - from the smallest of time trials to the invasion of the Grand Tours, Rouleur have captured a unique picture of a year in bike racing. *Hardback*

Keep Calm and Pedal On

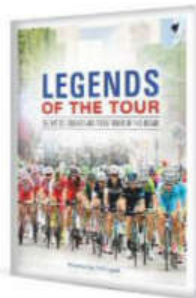
£9.99



In the never ending streams of traffic and the choking fumes of pollution this book gives the average cycle enthusiast or, indeed novice, a collection of quotes, sayings and proverbs on even more reasons why one should get on their bike. In the format of the bestselling Keep Calm and Carry On, Keep Calm and Pedal On is the perfect gift for keen bikers. *Hardback*

Legends of the Tour

Foreword by Phil Liggett £20.00



A dynamic and insightful portrait of the world's most famous cycling race, Tour de France. A selection of international cycling writers share their views on the courses, rivalries, its crop of great riders from the young climber to legendary riders. *Hardback*

Infographic Guide to Cycling

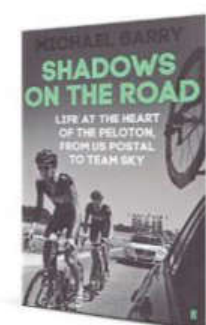
£12.99



A fun illustrated guide to the world of cycling and all things bike-related. This beautifully designed book presents cycling in a way you've never seen before. Mixing cycling facts with expert bike tech advice, this book features a unique and intriguing overview of the realm of the velocipede. *Hardback*

Shadows on the Road

by Michael Barry £17.99



Michael Barry explores what it was like to ride as a teammate alongside such giants of the sport as Lance Armstrong, Mark Cavendish, Bradley Wiggins and Chris Froome. *Hardback*

The Pain Free Cyclist

Foreword by Bradley Wiggins £16.99



It's not (just) about the bike. Ride your bike long enough and you're likely to get injured! This book takes you through the most common cycling injuries, what they are, why you get them and what you can do to get rid of them and get you back riding pain free. *Paperback*

Personal Best

by Beryl Burton £19.95



The autobiography of Beryl Burton, Personal Best is a remarkable story of determination in the face of illness, courage in her long but lonely pre-eminence and above all, of never, ever giving less than her best. *Hardback*

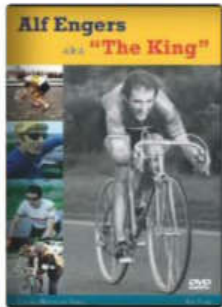
101 Damnations

by Ned Boulting £14.99



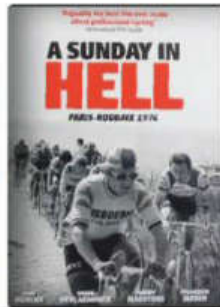
Dispatches from the 101st Tour de France 101 Damnations is a chance to relive the 2014 race, stage for stage, fall after fall, tantrum by tantrum; just the good bits mind, without all the aerial shots of castles. Or sunflowers. *Hardback*

Alf Engers A.K.A. The King £19.99



Packed with rare film footage of the time, extended interviews with Engers today, this film gives us an unforgettable portrait of a great rider, and of a vanished era in the sport of time-trialling. For those with memories of those years, and for all those who care about the history of Cycle Sport, this film is a must.

A Sunday In Hell £19.99



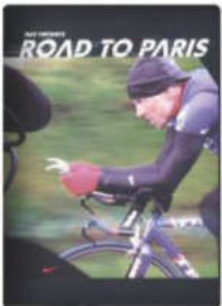
1976 Paris- Roubaix A psychological and dramatic study of the battle between some of the greatest legends of the sport. Eddy Merckx, Roger De Vlaeminck, Freddy Maertens and Francesco Moser all participated in the 1976 Paris-Roubaix, but the star of the film is the race itself.

Battle of the Bikes/ On Yer Bike £19.99



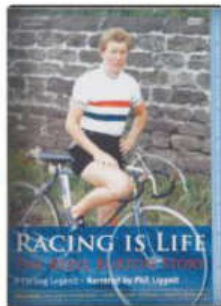
Battle of the Bikes compares Graeme Obree, who built his own bike out of washing machine parts and rode it in his own unique crouched position to become the World Hour Record holder. **On Yer Bike** is an intimate portrait of Obree from an amateur cyclist to World Hour Record holder.

Road To Paris £19.99



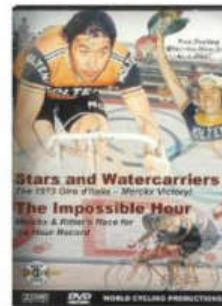
Documentary that covers Lance Armstrong and the 2001 US Postal Service Team over the course of 27 days in April as they prepare to win a third consecutive TDF. Neverbeforeseen footage takes you inside team meetings and in the team car during cycling's greatest races, including a down to-the wire Amstel Gold and the hellish Paris-Roubaix.

Racing Is My Life £18.99



The Beryl Burton story. Racing is Life... anything else before or after is just waiting', Steve McQueen from the film 'Le Mans'. A quote that sums up Beryl Burton, the Yorkshire housewife, who despite a severe illness in childhood, became a cycling phenomenon, the most successful British female cyclist ever.

Stars and Watercarriers/ The Impossible Hour £22.49



Stars & Watercarriers: 1973 Giro d'Italia. Considered one of the best films ever made on professional cycling. **The Impossible Hour:** Follow Eddy Merckx and Ole Ritter's race for the hour record.

Final Hour £14.99



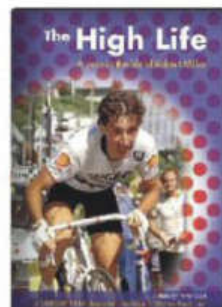
Chris Boardman's Quest for the World Hour Record. This moving and intimate film tells the story of Chris Boardman's attempt at a new hour record. The cameras follow him all the way to the decisive day in October 2000 at Manchester's velodrome.

2 Days 2 Nights £19.99



1 day, 21 hours, 3 minutes and 16 seconds... That's how long it took John Woodburn to ride the 848 miles from Lands End to John O'Groats. He broke the record by 96 minutes. This record attempt, filmed in 1982 will long be remembered as a ride which placed John among the greats of long distance time trialling.

The High Life £19.99



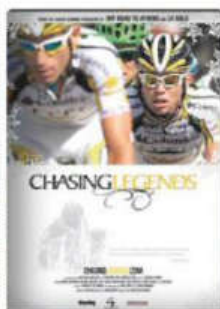
A Year in the Life of Robert Millar. In this unique film made in 1985 with the eyes of the UK on him, the camera records his feelings about the year, his performance and morale within the team.

A Ride With George Hincapie £19.99



Spanning his early years as a junior to the disappointment of 2009 Roubaix, this unadorned everything-you-ever-wanted-to-know-about-the-guy portrait puts a microscope on the silent man of cycling, George Hincapie.

Chasing Legends DVD £19.99 Blu-Ray £24.99



Chasing Legends touches on the rich history, passion and true grit of The Tour as seen through the eyes of Team HTC Columbia along with commentary from some of the sports most prolific heroes. With a stunning array of HD cameras, Chasing Legends will take viewers deeper into the pro peloton than ever.

Tour De France: The View from the Sky £11.99



The world's greatest bike race as seen from the air. The combination of the Tour de France and stunning images of the French countryside is a real love story and this incredible film presents the Tour as seen from the air, which is truly breathtaking. Revisit the stunning scenery that France is famous for.

ORDER YOURS TODAY! All prices exclude p&p.

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Osteopathy – how can it help cyclists?

*CA talks to osteopath and former pro rider
Alice Monger-Godfrey*

We often see professional riders stretched out on the massage couch after a Grand Tour stage,

having any biomechanical issues addressed ahead of the next day's racing. And now an increasing number of us are seeing the importance of looking after our bodies from head to toe too, in order to alleviate or even prevent aches and pains on and off the bike.

Rebecca Charlton caught up with former professional cyclist and now osteopath Alice Monger-Godfrey, who works behind the scenes with some of the biggest stars of the pro peloton to keep them firing on all cylinders.

Picking up the model spine at Wimbledon Village Osteopaths, Monger-Godfrey laughs as she explains that a person's discs are like a chocolate Rolo, with a tough exterior and a "gooey middle". Her passion for osteopathy and every aspect of making the body tick is infectious, and with a background in pro cycling there's no one better to appreciate the strains bike riding can put on the body.

"I first got into racing via the British Cycling Talent Team, which came to my school, Nonsuch High School for Girls, the same school and year as Olympic champion Joanna Rowsell was spotted," she explains. "We were asked if anyone wanted to try out to become the next Olympic champion.

"I'd never really cycled before so the idea of missing a maths lesson was more appealing to me than winning an Olympic medal at the time! After completing all the stages I was selected, guided and funded through the start of my racing career."

She went on to rack up a number of big wins, representing Great Britain on the road and track, before riding for Swift Women's Professional Road Race Team and De Sprinters Malderen in Belgium.

Monger-Godfrey was just 22 when she made the difficult decision to retire from professional cycling as an athlete but continues to work alongside the riders she progressed with, now looking after some of the fastest legs in the world.

"I studied at the British School of Osteopathy for four years to complete my Masters degree. I set up AMG Osteo Clinics and I now work with teams, including Wiggle-Honda at the RideLondon Grand Prix this year," she says.

"It was fantastic being on the other side of the fence working alongside cyclists I used to race with like Olympic champion Dani King and catching up on old times."

Combined with her vast knowledge in osteopathy there's no one better to understand the demands placed on a rider

day after day: "I think it's nice for the riders to have a chat about normal things and unwind while they're on the massage table. All sorts of topics come up day to day as an osteo!"

"It was brilliant to treat them and show them what osteopathy has to offer, not only in being able to treat their niggles but also optimise performance and prevent further injuries."

So that's the top pros, but what about us mere mortals? "At the top level, elite racing cyclists only ride their bikes. If they're not riding their bike they're not standing, they're not sitting, they're lying down and resting, so a lot of the causes of pain for them will be on the bike," she explains.

The problem for those of us with a day job, however, is that we sit at desks or spend hours on our feet, then squeeze in our training. "The risk then is that you overload your body and get injured. And that's where the problem starts."

What is osteopathy?

So what exactly is an osteopath responsible for? The National Health Service defines it as "detecting, treating and preventing health problems by moving, stretching and massaging a person's muscles and joints". Osteopaths primarily work through the neuro-musculo-skeletal system and Monger-Godfrey is clearly very in tune with the patients she sees, and was commenting on my posture straight away during our interview — despite years of being reminded to 'sit up straight', it clearly hasn't sunk in. But it's the little things like this that can make a big difference when on the bike.

In fact, Monger-Godfrey explains that sitting still for longer than 20 minutes means the multifidus muscle (the muscle that supports and travels up the length of your spine) stops engaging entirely, which can lead to injury, so simply standing and moving regularly can help your neck and back considerably.

"The most exciting part of my career is each day I am learning. There are never two patients the same and absolutely no two days the same and that means I am constantly striving and learning to find out why this patient is presenting these particular problems here and now.

"There is a saying that the day you think you know everything about the body is the day you stop treating. There are different physical and mental challenges I face being an osteopath compared with when I

ALICE'S EXPERT TIPS



Sleep on your side

rather than your front, as it will help to keep fluid in the discs in your spine so they remain supple.



Sip lots of water

throughout the day — it's your best friend when it comes to a healthy back and general wellbeing.



Listen to your body

If you're in pain don't ignore it — it could mean injury or it could point to other underlying health problems.

was racing, but I love being able to help people get their bodies back on track."

The small things

With most of us putting a significant number of training hours in each week, it's no wonder niggles can creep in towards the end of the autumn. But being aware of how your body feels, Monger-Godfrey explains, will help you keep on top of it.

"Don't leave your niggles untreated. Go and get them sorted before they get worse and start affecting you at work, on the bike or just in everyday life," she says. "A regular MOT is essential especially when you are putting your body through its paces."

When I ask what she most commonly sees cyclists complaining of, it all sounds rather familiar: "I treat a lot of lower back, neck and knee pain. Osteopathy helps to identify not only the symptoms but also the cause of the problem with a holistic approach.

"Through a wide range of techniques including manipulation and massage you can help the body function better and thus increase performance. I find identifying

specific cycling issues comes as second nature to me and with the appropriate examinations and treatment protocol you can really make a difference to

improve and lengthen a cyclist's career."

As I stand up, I can see Alice glance at my heavy shoulder bag and stooping posture. "That won't help," she says with a grin as I leave. "It's not cool but get yourself a rucksack to even out the load. It's the simple things."

"A regular MOT is essential when you're putting your body through its paces"



EVENT CALENDAR

The best events countrywide for October and November

Sunday October 11

Y YORKSHIRE
BLUE GIRAFFE BICYCLES
FALLING LEAVES SPORTIVE
DISTANCE 35/55 MILES
TOTAL ELEVATION 856M (LONG)
HQ Great Broughton and Kirkby Sports Club, TS9 7HG
Entry £15/£20
CA says This ride takes you into the northern edge of the York Moors that will be bursting with the reds and golds of the season. A series of climbs will carry you south through the park to Hawnbby on the River Rye. The route then climbs Clay Bank before returning to the start.
 @bluegiraffe1
www.bluegiraffebicycles.co.uk

SE SURREY
CYCLING WEEKLY'S
BOX HILL ORIGINAL

KEY

C Central **E** Eastern
EM East Midlands **I** Ireland
IM Isle of Man **NE** North East
N N. Ireland **NW** North West
Sc Scotland **SE** South East
S South **SW** South West
W Wales **WM** West Midlands

DISTANCE 44/80/103 MILES
TOTAL ELEVATION 2,038M (LONG)
HQ Friends Life, Dorking, RH4 1QA
Entry £25/£35
CA says Our sister magazine, *Cycling Weekly*, sees its road sportive season end in style with a jaunt around the Surrey Hills. Every rider will get to tackle the iconic ascent of Box Hill, with those up for the standard and epic routes also facing Leith Hill and the 18 per cent gradients of Whitedown.
 @cyclingweekly
www.bookmyride.co.uk

S GLOUCESTERSHIRE
THE COTSWOLD
EDGE SPORTIVE
DISTANCE 77/100/135KM
TOTAL ELEVATION 2,071M (LONG)
HQ The Renishaw site, Wotton-under-Edge, GL12 8JR
Entry £22/£23/£24
CA says After meandering through quiet, leafy lanes to stretch the legs out you hit the western edge of the Cotswolds where steep climbs await. Hope for a clear day as there will be a series of stunning views over the Severn Estuary.
 @cyclosportive
www.southernsportive.com

Sunday October 18

SW DEVON
THE EXMOOR BEAST
DISTANCE 62/100 MILES
TOTAL ELEVATION 3,267 METRES (LONG)
HQ Tiverton High School, EX16 6SQ
Entry £30
CA says This established challenge is not an easy day out, as the name and the total elevation suggest. The route is packed full of uphill battles with the main test for the day the climb up to the highest point on Exmoor, Dunkery Beacon.
www.exmoorbeast.org

NW CHESHIRE
TORELLI JODRELL BANK
AUTUMN SPORTIVE
DISTANCES 50/80 MILES
TOTAL ELEVATION 943 METRES (LONG)
HQ Poynton Leisure Centre, Poynton, SK12 1PU
Entry £22.50/£27
CA says These two routes are designed by experienced club cyclists to take in the mainly flat lands of the Cheshire plains. Of course there will be a few inclines to keep the legs warm and fend off the autumnal chill.
 @TeamTorelli
www.jbautumnsportive.blogspot.co.uk

S HAMPSHIRE
WIGGLE SOUTH DOWNS 100

DISTANCES 42/73/100 MILES
TOTAL ELEVATION 2,001 METRES (LONG)
HQ Chichester College, Chichester, PO19 1SB
Entry £23/£33
CA says This challenge takes all riders on a closed road hill-climb of Buster Hill — the South Downs' highest point. At just over 2.5km long and with the challenge in the final 20 miles it will be a tough test to grab that KOM or QOM if you've taken on the 100-mile route.
 @ukcyclingevents
www.ukcyclingevents.co.uk

Sunday October 25

C NORTHAMPTONSHIRE
WIGGLE CIRCUIT BREAKER
DISTANCES 52/84 MILES
TOTAL ELEVATION 622 METRES (LONG)
HQ Silverstone, Towcester, NN12 8TN
Entry £33
CA says This rolling course means you could be aiming to get that gold time before thinking about the ever-approaching festive break and hours spent indoors on the turbo. The Epic riders will be in for a leg-awakening treat with the short but leg-sapping Burton Hill climb.
 @ukcyclingevents
www.ukcyclingevents.co.uk

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Lizzie Armitstead
 Cycleplan Ambassador

*0% APR available on all policies with an annual premium of over £20. Terms and conditions apply. Policy wording available on request. Cycleplan is a trading name of JRW Group Services Ltd which is Authorised and Regulated by the Financial Conduct Authority.

Saturday October 31

S HAMPSHIRE
Wiggle Devil's Punch
DISTANCES 51/74 MILES
TOTAL ELEVATION 1,396 (LONG)
HQ Treloar College,
Holybourne, GU34 4GL
Entry £33
CA says Traversing between the North and South Downs the routes loop the Devil's Punch Bowl, which is a large natural amphitheatre of dry sandy heath. These routes are nicely undulating and slightly shorter to reflect the time of year, but never fear — there are still a couple of good hills to sink your teeth into and get those legs pumping.
[@ukcyclingevents](#)
www.ukcyclingevents.co.uk

Sunday November 1

NW CHESHIRE
POLOCINI
WINTER WARMER
DISTANCE 66 MILES
TOTAL ELEVATION 696 METRES
HQ The Woodford Centre,
Woodford, SK7 1PS
Entry £15/£20
CA says After a cold November ride you'll want some good food to warm you up. Luckily Masterchef finalist Jackie Kearney of The Hungry Gecko will be providing the post-ride grub.
www.polocini.com

Sunday November 8

SW SOMERSET
SOMERSET
SCREAMER SPORTIVE
DISTANCE 68/83 MILES
TOTAL ELEVATION 1,900 METRES (LONG)

HQ Adventure Cafe, South Petherton, TA13 5DJ
Entry £24
CA says Take in some of South Somerset's top beauty spots including Glastonbury Tor, Ham Hill and Wells Cathedral. If you've never ridden Cheddar Gorge this could be the perfect excuse. At the 30-mile mark the three-mile long climb will certainly wake the legs up with its 16 per cent sections winding up through the dramatic rock.
www.grandtourcycling.co.uk

SE KENT
WIGGLE
HELLFIRE CORNER
DISTANCES 24/54/82 MILES
TOTAL ELEVATION 725 METRES (LONG)
HQ Folkestone Racecourse,
CT21 4HX
Entry £23/£33
CA says This event takes its name from the southern area of the UK during WW2 when it was within firing range of the German air force and guns. The route touches the Kent coast at Romney Marshes and leads you past the sands of Camber.
[@ukcyclingevents](#)
www.ukcyclingevents.co.uk

Sunday November 15

SW DORSET
WIGGLE BITTER BEAST
DISTANCE 40/70 MILES
TOTAL ELEVATION 1,273 (LONG)
HQ National Tank Museum,
BH20 6JG
Entry £33
CA says Set along the Jurassic Coastline this will be top notch for views including those of Corfe Castle and from the seafront of Swanage you can even see over

NEXT MONTH

Ride stories

Wiltshire Wildcat
90 miles of grippy roads and narrow lanes
Fred Whitton
Taking on one of the world's hardest sportives

Bike features

2016 bikes: what's new from the big brands
Winter bike group test: what to buy

Tech investigates
A need for aero wheels

More group tests

Winter gloves, training wheels, mini-pumps

Training + Fitness

How to get bike fit and riding position right
Your December training plans

Omega supplements
Anti-oxidants profiled

Columnists

"Why do they hate us?"
New School worries about British attitude

On sale Nov 4

to the Isle of Wight.
[@ukcyclingevents](#)
www.ukcyclingevents.co.uk

Sunday November 22

E SUFFOLK
WIGGLE ROYAL FLYER
DISTANCE 43/70 MILES
TOTAL ELEVATION 692 METRES (LONG)
HQ The Racecourse, Fakenham,
NR21 7NY
Entry £33
CA says Why not head over to North Norfolk and clock up some winter miles. From Fakenham Racecourse this gently rolling route will take riders past the Royal Sandringham Estate showing off the great golden colours of the tree-lined road as


they shake off their foliage.
[@ukcyclingevents](#)
www.ukcyclingevents.co.uk

Sunday December 6


S HAMPSHIRE
HAMPSHIRE SPORTIVE
DISTANCE 12/30/50/70 MILES
TOTAL ELEVATION 1,402 METRES (LONG)
HQ Queen Mary's College,
Basingstoke, RG21 3H
Entry £7.50/£18.50
CA says You might be looking to ease off come December but the long route still offers up 1,402m of elevation. That should serve nicely to keep the winter chill at bay.
[@EvansCycles](#)
www.evanscycles.com

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For more information on cycle accident claims, go to www.cycle-claims.co.uk

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My toughest day



Beaumont's epic ride began in Cairo

Mark Beaumont Cairo-Cape Town world record attempt, May 2015

I always think the toughest days on ultra-rides happen when psychologically you're already a bit broken. Cairo to Cape Town was a 7,000-mile route and Sudan through the Sahara desert was brilliant — I was absolutely flying doing 200 plus miles a day and the roads were super-fast — it was like riding on a velodrome.

I was feeling really good a week and a half into the ride but then I started climbing up into the Ethiopian highlands, ascending to about 3,400 metres. It was tough, tough, tough for about four or five days, and then I ate some bad goat stew and I got food poisoning. It's really very hard to cycle through food poisoning, especially in mountainous terrain, and then a few days later as I was just recovering I had some muddy water in my bottles, which pretty much gave me water poisoning.

I was south of the Ethiopian capital and

thought: "Right, I'm starting to feel better, I'm going to get to the Kenyan border and it's all going to be alright." Then I reached some roadworks and asked one of the workers: "How long does this carry on for?" I was on a carbon race bike and this wasn't even a graded farm road. In the afternoon when it rained, roads like these turned into quagmires, a real nightmare. He replied: "Oh, we've dug up the entire road to the Kenyan border," so I was faced with 350km of rubble, dirt and mud.

So while I was still recovering from poisoning, I psychologically hit rock bottom. I went from trying to smash a record to just getting through the ride. That was without doubt my worst day of the whole ride — it was 80 miles and my average over the whole trip was 160. I was carrying the bike in sections and was using a spoon to dig the mud out from between the fork, frame and tyres. I still had 4,500 miles to go.

Mark Beaumont continued on to set the new world record after cycling from Cairo to Cape Town in 42 days, beating the previous record by 17 days. He is an ambassador for Ride Social, British Cycling's initiative to get more people cycling together.

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